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ABAFFY, JOZSEF: One class of dual matrix methods, **27**: 93–102 (1979)

ABARBANEL, S. AND GOTTLIEB, D.: On proving stability of multidimensional difference schemes, **11**: 247–250 (1975)

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ACHILLES, EVA: Doubly stochastic matrices with some equal diagonal sums, **22**: 293–296 (1978)

ACZEL, J.: Solution of a system of functional-differential equations arising from an optimization problem, **71**: 9–13 (1985)

ACZEL, J. AND NG, C. T.: Determination of all semisymmetric recursive information measures of multiplicative type on n positive discrete probability distributions, **52**: 1–30 (1983)

ADIN, RON: Extreme positive operators on minimal and almost minimal cones, **44**: 61–86 (1982)

ADKINS, WILLIAM A.: The pointwise-local-global principle for solutions of generic linear equations, **66**: 29–43 (1985)

AFRIAT, S. N.: On sum-symmetric matrices, **8**: 129–140 (1974)

AGANAGIC, MUHAMED: On diagonal dominance in linear complementarity, **39**: 41–49 (1981)

AHAC, ALAN A., BUONI, JOHN J., AND OLESKY, D. D.: Stable *LU* factorization of *H*-matrices, **99**: 97–110 (1988)

ALEFELD, G. AND SCHNEIDER, N.: On square roots of *M*-matrices, **42**: 119–132 (1982)

ALEXANDER, S. T., PAN, C.-T., AND PLEMMONS, R. J.: Analysis of a recursive least squares hyperbolic rotation algorithm for signal processing, **98**: 3–40 (1988)

ALIKAKOS, N. AND BATES, P. W.: Estimates for the eigenvalues of the Jordan product of Hermitian matrices, **57**: 41–56 (1984)

ALIKAKOS, NICHOLAS D. AND BATES, PETER W.: Erratum: "Estimates for the eigenvalues of the Jordan product of Hermitian matrices", **65**: 282 (1985)

AMANN, HERBERT: Semigroups and nonlinear evolution equations: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 3–32 (1986)

ANDERS, G. J.: *See* Gunn, E. A.

ANDERSON, B. D. O.: Orthogonal decomposition defined by a pair of skew-symmetric forms, **8**: 91–93 (1974)

ANDERSON, B. D. O.: *See* Limebeer, D. J. N.

ANDERSON, BRIAN D. O.: Structure of a class of unimodular matrices, **22**: 167–174 (1978)

ANDERSON, BRIAN D. O.: *See* Bitmead, Robert R.

ANDERSON, BRIAN D. O. AND MOORE, JOHN B.: A matrix Kronecker lemma, **15**: 227–234 (1976)

ANDERSON, IAN M.: Determinantal ideals and the Capelli identities, **69**: 269–277 (1985)

ANDERSON, N., SAFF, E. B., AND VARGA, R. S.: On the Enestrom-Kakeya theorem and its sharpness, **28**: 5–16 (1979)

ANDERSON, T. W. AND OLKIN, I.: Maximum-likelihood estimation of the parameters of a multivariate normal distribution, **70**: 147–171 (1985)

ANDERSON, T. W. AND TAYLOR, JOHN B.: An inequality for a sum of quadratic forms with applications to probability theory, **30**: 93–99 (1980)

ANDERSON, W. N., JR., MORLEY, T. D., AND TRAPP, G. E.: Symmetric function means of positive operators, **60**: 129–143 (1984)

ANDERSON, WILLIAM N., JR. AND TRAPP, GEORGE E.: A class of monotone operator functions related to electrical network theory, **15**: 53–67 (1976)

ANDO, T.: Approximation in trace norm by positive semidefinite matrices, **71**: 15–21 (1985)

ANDO, T.: Concavity of certain maps on positive definite matrices and applications to Hadamard products, **26**: 203–241 (1979)

ANDO, T.: Generalized Schur complements, **27**: 173–186 (1979)

ANDO, T.: On the arithmetic-geometric-harmonic-mean inequalities for positive definite matrices, **52**: 31–37 (1983)

ANDO, T.: Totally positive matrices, **90**: 165–219 (1987)

ANDO, T. AND BUNCE, JOHN W.: The geometric mean, operator inequalities, and the Wheatstone bridge, **97**: 77–91 (1987)

ANDRES, T. H., HOSKINS, W. D., AND STANTON, R. G.: The determinant of a class of skew-

symmetric Toeplitz matrices, **14**: 179–186 (1976)

ANDRESEN, PATRICIA: *See* Marcus, Marvin

ANDREW, ALAN L.: Eigenvectors of certain matrices, **7**: 151–162 (1973)

ANSELONE, PHILIP M. AND LEE, JOHN W.: Spectral properties of integral operators with nonnegative kernels, **9**: 67–87 (1974)

ANSTREICHER, KURT M. AND ROTHBLUM, URIEL G.: Using Gauss-Jordan elimination to compute the index, generalized nullspaces, and Drazin inverse, **85**: 221–239 (1987)

ANTOULAS, A. C.: New results on the algebraic theory of linear systems: the solution of the cover problems, **50**: 1–43 (1983)

APPELGATE, HARRY AND ONISHI, HIRONORI: The similarity problem for 3×3 integer matrices, **42**: 159–174 (1982)

ARAZI, BENJAMIN: Some properties of Hadamard matrices generated recursively by Kronecker products, **25**: 27–39 (1979)

ARIOLI, M. AND LARATTA, A.: Error analysis of algorithms for computing the projection of a point onto a linear manifold, **82**: 1–26 (1986)

ARMS, R. J. AND SHISHA, O.: A representation of the norm in finite-dimensional normed linear spaces, **7**: 173–174 (1973)

ARNOLD, LUDWIG: Deterministic version of Wigner's semicircle law for the distribution of matrix eigenvalues, **13**: 185–199 (1976)

ARTZROUNI, MARC: A theorem on products of matrices, **49**: 153–159 (1983)

ARTZROUNI, MARC: On the convergence of infinite products of matrices, **74**: 11–21 (1986)

ASHLEY, JONATHAN: On the Perron-Frobenius eigenvector for nonnegative integral matrices whose largest eigenvalue is integral, **94**: 103–108 (1987)

ASPVALL, BENGT AND SHILOACH, YOSSI: A fast algorithm for solving systems of linear equations with two variables per equation, **34**: 117–124 (1980)

ATCHISON, T. A.: *See* Pye, W. C.

ATHERTON, D. P.: *See* Mees, A. I.

ATKINSON, M. D. AND LLOYD, S.: Bounds on the ranks of some 3-tensors, **31**: 19–31 (1980)

ATKINSON, M. D. AND STEPHENS, N. M.: On the maximal multiplicative complexity of a family of bilinear forms, **27**: 1–8 (1979)

ATTEIA, MARC: Systemes polarises noyaux diminutifs de variation, **5**: 347–373 (1972)

AU-YEUNG, YIK HOI: On the semi-definiteness of the real pencil of two hermitian matrices, **10**: 71–76 (1975)

AU-YEUNG, YIK-HOI: Some inequalities for the rational power of a nonnegative definite matrix, **7**: 347–350 (1973)

AU-YEUNG, YIK HOI AND POON, YIU TUNG: 3×3 orthostochastic matrices and the convexity of generalized numerical ranges, **27**: 69–79 (1979)

AUPETIT, BERNARD, LAFFEY, THOMAS J., AND ZEMANEK, JAROSLAV: Spectral classification of projections, **41**: 131–135 (1981)

AUPETIT, BERNARD AND ZEMANEK, JAROSLAV: Local behavior of the spectrum near algebraic elements, **52**: 39–44 (1983)

AUSLANDER, L., FEIG, E., AND WINOGRAD, S.: Direct sums of bilinear algorithms, **38**: 175–192 (1981)

AVDELAS, G. AND HADJIDIMOS, A.: Jordan-Wachspress parameters in three dimensions, **24**: 251–261 (1979)

AXELSSON, O.: A general incomplete block-matrix factorization method, **74**: 179–190 (1986)

AXELSSON, O., BRINKKEMPER, S., AND ILIN, V. P.: On some versions of incomplete block-matrix factorization iterative methods, **58**: 3–15 (1984)

AXELSSON, OWE: Conjugate gradient type methods for unsymmetric and inconsistent systems of linear equations, **29**: 1–16 (1980)

AXELSSON, OWE AND POLMAN, BEN: On approximate factorization methods for block matrices suitable for vector and parallel processors: Special volume on parallel computing, **77**: 3–26 (1986)

BACHEM, ACHIM AND KORTE, BERNHARD: Minimum norm problems over transportation polytopes, **31**: 103–118 (1980)

BAHL, CHRISTINA A. AND CAIN, BRYAN E.: The inertia of diagonal multiples of 3×3 real matrices, **18**: 267–280 (1977)

BAILEY, DUANE W. AND CRABTREE, DOUGLAS E.: Bounds for determinants, **2**: 303–309 (1969)

BAILEY, R. A.: Factorial design and abelian groups, **70**: 349–368 (1985)

BAKER, KIRBY A.: Strong shift equivalence and shear adjacency of nonnegative square integer matrices, **93**: 131–147 (1987)

BAKSALARY, J. K., KALA, R., AND KLACZYNSKI, K.: The matrix inequality $M \geqslant B^*MB$, **54**: 77–86 (1983)

BAKSALARY, J. K. AND KALA, R.: Symmetrizers of matrices, **35**: 51–62 (1981)

BAKSALARY, J. K. AND KALA, R.: The matrix equation $AXB + CYD = E$, **30**: 141–147 (1980)

BAKSALARY, J. K. AND KALA, R.: The matrix equation $AX - YB = C$, **25**: 41–43 (1979)

BAKSALARY, J. K. AND KALA, R.: Two relations between oblique and λ-orthogonal projectors, **24**: 99–103 (1979)

BAKSALARY, JERZY K.: A relationship between the star and minus orderings, **82**: 163–167 (1986)

BAKSALARY, JERZY K.: Strong unified-least-squares matrices for a general linear model, **70**: 61–65 (1985)

BAKSALARY, JERZY K. AND HAUKE, JAN: Partial orderings of matrices referring to singular values or eigenvalues, **96**: 17–26 (1987)

BAKSALARY, JERZY K. AND MARKIEWICZ, AUGUSTYN: Admissible linear estimators in restricted linear models, **70**: 9–19 (1985)

BAKSALARY, JERZY K. AND PUKELSHEIM, FRIEDRICH: A note on the matrix ordering of special C-matrices, **70**: 263–267 (1985)

BALAS, EGON: A duality theorem and an algorithm for (mixed-) integer nonlinear programming, **4**: 341–352 (1971)

BALASUBRAMANIAN, K.: On equality of some elements in matrices, **22**: 135–138 (1978)

BALL, JOSEPH A. AND GOHBERG, ISRAEL: Shift invariant subspaces, factorization, and interpolation for matrices. I. The canonical case, **74**: 87–150 (1986)

BALL, JOSEPH A. AND RAN, ANDRE C. M.: Global inverse spectral problems for rational matrix functions, **86**: 237–282 (1987)

BALLANTINE, C. S.: A note on the matrix equation $H = AP + PA$, **2**: 37–47 (1969)

BALLANTINE, C. S.: Numerical range of a matrix: some effective criteria, **19**: 117–188 (1978)

BALLANTINE, C. S.: Products of EP matrices, **12**: 257–267 (1975)

BALLANTINE, C. S.: Products of idempotent matrices, **19**: 81–86 (1978)

BALLANTINE, C. S., **1**: 261–280 (1968)

BALLANTINE, C. S.: *See* Yip, E. L.

BALLANTINE, C. S., PIERCE, STEPHEN, AND RODMAN, LEIBA: Simultaneous congruence of convex compact sets of Hermitian matrices with constant rank, **87**: 49–60 (1987)

BALLANTINE, C. S. AND YIP, E. L.: Congruence and conjunctivity of matrices, **32**: 159–198 (1980)

BALLANTINE, CHARLES S.: Products of positive definite matrices. IV, **3**: 79–114 (1970)

BANK, RANDOLPH E.: An automatic scaling procedure for a D'jakanov-Gunn iteration scheme, **28**: 17–33 (1979)

BANNAI, EIICHI: Tannaka-Krein duality for association schemes, **46**: 83–90 (1982)

BAPAT, R. AND RAGHAVAN, T. E. S.: On diagonal products of doubly stochastic matrices, **31**: 71–75 (1980)

BAPAT, R. B.: A bound for the permanent of the Laplacian matrix, **74**: 219–223 (1986)

BAPAT, R. B.: A stronger form of the Egorychev-Falikman theorem on permanents, **63**: 95–100 (1984)

BAPAT, R. B.: Applications of an inequality in information theory to matrices, **78**: 107–117 (1986)

BAPAT, R. B.: Inequalities for mixed Schur functions, **83**: 143–149 (1986)

BAPAT, R. B.: Two inequalities for the Perron root, **85**: 241–248 (1987)

BAPAT, R. B. AND KWONG, MAN KAM: A generalization of $A \circ A^{-1} \geqslant I$, **93**: 107–112 (1987)

BAPAT, R. B. AND SUNDER, V. S.: An extremal property of the permanent and the determinant, **76**: 153–163 (1986)

BAPAT, R. B. AND SUNDER, V. S.: On majorization and Schur products, **72**: 107–117 (1985)

BAPAT, RAVINDRA: D_1AD_2 theorems for multidimensional matrices, **48**: 437–442 (1982)

BAPAT, RAVINDRA: A matrix of permanents, **56**: 57–62 (1984)

BAPAT, RAVINDRA: Doubly stochastic matrices with equal subpermanents, **51**: 1–8 (1983)

BAPAT, RAVINDRA: On permanents of positive semidefinite matrices, **65**: 83–90 (1985)

BARANY, I. AND GRINBERG, V. S.: On some combinatorial questions in finite-dimensional spaces, **41**: 1–9 (1981)

BAREL, M. AND TAMIR, A.: Nested matrices and the existence of least majorized elements, **38**: 65–72 (1981)

BARKER, G. P.: *See* Poole, G. D.

BARKER, G. P., EIFLER, L. Q., AND KEZLAN, T. P.: A non-commutative spectral theorem, **20**: 95–100 (1978)

BARKER, G. P. AND SCHNEIDER, HANS: Algebraic Perron-Frobenius theory, **11**: 219–233 (1975)

BARKER, G. P., TAM, B. S., AND DAVILA, NORBIL: A geometric Gordan-Stiemke theorem, **61**: 83–89 (1984)

BARKER, G. P. AND TURNER, R. E. L.: Some observations on the spectra of cone preserving maps, **6**: 149–153 (1973)

BARKER, GEORGE P.: *See* Shangjun, Yang

BARKER, GEORGE PHILIP AND FORAN, JAMES: Self-dual cones in Euclidean spaces: Collection of articles dedicated to Olga Taussky Todd, **13**: 147–155 (1976)

BARKER, GEORGE PHILLIP: Common solutions to the Lyapunov equations, **16**: 233–235 (1977)

BARKER, GEORGE PHILLIP: Matricial norms over cones, **6**: 175–182 (1973)

BARKER, GEORGE PHILLIP: Perfect cones, **22**: 211–221 (1978)

BARKER, GEORGE PHILLIP: The lattice of faces of a finite dimensional cone, **7**: 71–82 (1973)

BARKER, GEORGE PHILLIP: Theory of cones, **39**: 263–291 (1981)

BARKER, GEORGE PHILLIP, HILL, RICHARD D., AND HAERTEL, RAYMOND D.: On the completely positive and positive-semidefinite-preserving cones, **56**: 221–229 (1984)

BARKER, GEORGE PHILLIP AND LOEWY, RAPHAEL: The structure of cones of matrices, **12**: 87–94 (1975)

BARKER, GEORGE PHILLIP AND TAM, BIT SHUN: Graphs for cone preserving maps, **37**: 199–204 (1981)

BARNES, E. R. AND HOFFMAN, A. J.: On bounds for eigenvalues of real symmetric matrices, **40**: 217–223 (1981)

BARNETT, S.: Greatest common divisor of two polynomials, **3**: 7–9 (1970)

BARNETT, S.: Location of zeros of a complex polynomial, **4**: 71–76 (1971)

BARNETT, S.: *See* Gover, M. J. C.

BARNETT, S.: *See* Joyce, G. T.

BARNETT, S.: *See* Shane, B. A.

BARNETT, S. AND JURY, E. I.: Inners and Schur complement, **22**: 57–63 (1978)

BARNETT, STEPHEN: A companion matrix analogue for orthogonal polynomials, **12**: 197–208 (1975)

BARNETT, STEPHEN: Congenial matrices, **41**: 277–298 (1981)

BARNETT, STEPHEN: Division of generalized polynomials using the comrade matrix, **60**: 159–175 (1984)

BARNETT, STEPHEN: Euclidean remainders for generalized polynomials, **99**: 111–122 (1988)

BARNETT, STEPHEN: Note on inversion of certain block-partitioned matrices: Collection of articles dedicated to Olga Taussky Todd, **13**: 133–137 (1976)

BARNETT, STEPHEN: *See* Maroulas, John

BARRETT, WAYNE W.: A theorem on inverses of tridiagonal matrices, **27**: 211–217 (1979)

BARRETT, WAYNE W.: Toeplitz matrices with banded inverses, **57**: 131–145 (1984)

BARRETT, WAYNE W.: *See* Johnson, Charles R.

BARRETT, WAYNE W. AND FEINSILVER, PHILIP J.: Inverses of banded matrices, **41**: 111–130 (1981)

BARRETT, WAYNE W. AND JOHNSON, CHARLES R.: Determinantal formulae for matrices with sparse inverses. II. Asymmetric zero patterns, **81**: 237–261 (1986)

BARRETT, WAYNE W. AND JOHNSON, CHARLES R.: Determinantal formulae for matrices with sparse inverses, **56**: 73–88 (1984)

BARRETT, WAYNE W. AND JOHNSON, CHARLES R.: Possible spectra of totally positive matrices, **62**: 231–233 (1984)

BART, H.: Transfer functions and operator theory: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 33–61 (1986)

BARTELS, RICHARD: A penalty linear programming method using reduced-gradient basis-

exchange techniques, **29**: 17–32 (1980)

BARWICK, DAVID T. AND GILBERT, JIMMIE D.: Generalizations of the reverse order law with related results, **8**: 345–349 (1974)

BASKETT, THOMAS S. AND KATZ, IRVING J.: Theorems on products of EP_r matrices, **2**: 87–103 (1969)

BATES, P. W.: *See* Alikakos, N.

BATES, PETER W.: *See* Alikakos, Nicholas D.

BATIGNE, DANIEL: Integral generalized inverses of integral matrices, **22**: 125–134 (1978)

BAUER, F. L., DEUTSCH, E., AND STOER, J.: Abschatzungen fur die Eigenwerte positiver linearer Operatoren, **2**: 275–301 (1969)

BAXTER, DAVID K.: The existence of matrices with prescribed characteristic and permanental polynomials, **22**: 175–189 (1978)

BEARD, JACOB T. B., JR.: Matrix fields, regular and irregular: a complete fundamental characterization, **81**: 137–152 (1986)

BEARD, JACOB T. B., JR. AND MCCONNEL, ROBERT M.: Matrix fields over the integers modulo m, **14**: 95–105 (1976)

BEASLEY, E. T., JR. AND GIBSON, P. M.: A generalization of doubly stochastic matrices over a field, **10**: 241–257 (1975)

BEASLEY, LEROY B.: Linear transformations on matrices: The invariance of rank k matrices, **3**: 407–427 (1970)

BEASLEY, LEROY B.: Linear transformations on matrices: the invariance of sets of ranks, **48**: 25–35 (1982)

BEASLEY, LEROY B.: Linear transformations which preserve fixed rank, **40**: 183–187 (1981)

BEASLEY, LEROY B.: Rank-k-preservers and preservers of sets of ranks, **55**: 11–17 (1983)

BEASLEY, LEROY B.: Spaces of matrices of equal rank, **38**: 227–237 (1981)

BEASLEY, LEROY B.: The mathematical work of Joel Lee Brenner: With contributions by R. P. Boas, John de Pillis, Roger Lyndon, and James Wiegold, **90**: 1–13 (1987)

BEASLEY, LEROY B., GREGORY, DAVID A., AND PULLMAN, NORMAN J.: Nonnegative rank-preserving operators, **65**: 207–223 (1985)

BEASLEY, LEROY B. AND PULLMAN, NORMAN J.: Boolean-rank-preserving operators and Boolean-rank-1 spaces, **59**: 55–77 (1984)

BEASLEY, LEROY B. AND PULLMAN, NORMAN J.: Fuzzy rank-preserving operators, **73**: 197–211 (1986)

BEASLEY, LEROY B. AND PULLMAN, NORMAN J.: Operators that preserve semiring matrix functions, **99**: 199–216 (1988)

BEASLEY, LEROY B. AND PULLMAN, NORMAN J.: Term-rank, permanent, and rook-polynomial preservers, **90**: 33–46 (1987)

BEAUWENS, ROBERT: Lower eigenvalue bounds for pencils of matrices, **85**: 101–119 (1987)

BEAUWENS, ROBERT: On Axelsson's perturbations, **68**: 221–242 (1985)

BEAUWENS, ROBERT: Upper eigenvalue bounds for pencils of matrices, **62**: 87–104 (1984)

BEBIANO, N.: *See* da Providencia, J.

BEBIANO, NATALIA: Some analogies between the c-numerical range and a certain variation on this concept, **81**: 47–54 (1986)

BEBIANO, NATALIA AND DA PROVIDENCIA, J.: On the determinant of certain strictly dissipative matrices, **83**: 117–128 (1986)

BEBIANO, NATALIA AND QUEIRO, JOAO FILIPE: The determinant of the sum of two normal matrices with prescribed eigenvalues, **71**: 23–28 (1985)

BECKER, RONALD I.: Necessary and sufficient conditions for the simultaneous diagonability of two quadratic forms, **30**: 129–139 (1980)

BEESACK, PAUL R.: The spread of matrices and polynomials, **31**: 145–149 (1980)

BEEZER, ROBERT A.: On the polynomial of a path, **63**: 221–225 (1984)

BEEZER, ROBERT A.: Trivalent orbit polynomial graphs, **73**: 133–146 (1986)

BELL, C. LEARY: Generalized inverses of circulant and generalized circulant matrices, **39**: 133–142 (1981)

BELLISSARD, JEAN, IOCHUM, BRUNO, AND LIMA, RICARDO: Homogeneous and facially homogeneous self-dual cones, **19**: 1–16 (1978)

BELLMAN, RICHARD: Some inequalities for the square root of a positive definite matrix, **1**: 321–324 (1968)

BEN-ARTZI, A., ELLIS, R. L., GOHBERG, I., AND LAY, D. C.: The maximum distance problem and band sequences, 87: 93–112 (1987)

BEN-ARTZI, ASHER AND SHALOM, TAMIR: On inversion of Toeplitz and close to Toeplitz matrices, 75: 173–192 (1986)

BEN-ISRAEL, ADI: A Cramer rule for least-norm solutions of consistent linear equations, 43: 223–226 (1982)

BEN-ISRAEL, ADI: *See* Berman, Abraham

BEN-ISRAEL, ADI: *See* Robers, Philip D.

BENDER, EDWARD A.: Classes of matrices and quadratic fields, 1: 195–201 (1968)

BENDER, EDWARD A.: The dimensions of symmetric matrices with a given minimum polynomial, 3: 115–123 (1970)

BENEDETTI, R. AND CRAGNOLINI, P.: On simultaneous diagonalization of one Hermitian and one symmetric form, 57: 215–226 (1984)

BENNETT, GRAHAME: Lower bounds for matrices, 82: 81–98 (1986)

BENSON, R. V. AND SHIFLETT, R. C.: Doubly stochastic matrices over arbitrary vector spaces and the Birkhoff theorem, 42: 145–158 (1982)

BERCOVICI, HARI: Note on property $(\mathbf{A}_1)$, 91: 213–216 (1987)

BERENSTEIN, CARLOS A. AND STRUPPA, DANIELE C.: Small degree solutions for the polynomial Bezout equation, 98: 41–55 (1988)

BERG, LOTHAR: General operational calculus: Proceedings of the symposium on operator theory (Athens, 1985), 84: 79–97 (1986)

BERG, LOTHAR: Three results in connection with inverse matrices: Proceedings of the symposium on operator theory (Athens, 1985), 84: 63–77 (1986)

BERGER, MARC A. AND FELZENBAUM, ALEXANDER: Sign patterns of matrices and their inverses, 86: 161–177 (1987)

BERKEY, DENNIS D.: A Gerschgorin theorem for difference equations. II, 14: 87–94 (1976)

BERKEY, DENNIS D.: A Gerschgorin theorem for linear difference equations and eigenvalues of matrix products, 11: 27–40 (1975)

BERKOVITS, JUHA: On the degree theory for mappings of monotone type and applications: Proceedings of the symposium on operator theory (Athens, 1985), 84: 243–249 (1986)

BERKOWITZ, S.: Extrema of elementary symmetric polynomials of the eigenvalues of the matrix $P^*KP + L$, 8: 273–280 (1974)

BERMAN, A. AND PLEMMONS, R. J.: Eight types of matrix monotonicity: Collection of articles dedicated to Olga Taussky Todd, 13: 115–123 (1976)

BERMAN, A., VARGA, R. S., AND WARD, R. C.: $\mathcal{ALPS}$: matrices with nonpositive off-diagonal entries, 21: 233–244 (1978)

BERMAN, ABRAHAM: Matrices and the linear complementarity problem, 40: 249–256 (1981)

BERMAN, ABRAHAM: Nonnegative matrices which are equal to their generalized inverse, 9: 261–265 (1974)

BERMAN, ABRAHAM: *See* Hershkowitz, Daniel

BERMAN, ABRAHAM: *See* Kessler, Ofra

BERMAN, ABRAHAM: *See* Shasha, Dafna

BERMAN, ABRAHAM AND BEN-ISRAEL, ADI: Linear equations over cones with interior: A solvability theorem with applications to matrix theory, 7: 139–149 (1973)

BERMAN, ABRAHAM, CENSOR, YAIR, AND SCHNEIDER, HANS: Haifa 1985 conference on matrix theory, 80: 173–260 (1986)

BERMAN, ABRAHAM AND GAIHA, PRABHA: A generalization of irreducible monotonicity, 5: 29–38 (1972)

BERMAN, ABRAHAM, HERSHKOWITZ, DANIEL, AND JOHNSON, CHARLES R.: Linear transformations that preserve certain positivity classes of matrices, 68: 9–29 (1985)

BERMAN, ABRAHAM AND HERSHKOWITZ, DANIEL: Characterization of acyclic D-stable matrices, 58: 17–31 (1984)

BERMAN, ABRAHAM AND HERSHKOWITZ, DANIEL: Combinatorial results on completely positive matrices, 95: 111–125 (1987)

BERMAN, ABRAHAM AND KOTZIG, ANTON: The length of a (0, 1) matrix, 20: 197–203 (1978)

BERMAN, ABRAHAM, NEUMANN, MICHAEL, AND STERN, RONALD J.: Cone reachability for nondiagonable linear differential systems, 81: 263–280 (1986)

BERMAN, ABRAHAM AND SAUNDERS, B. DAVID:

Matrices with zero line sums and maximal rank, **40**: 229–235 (1981)

BERMAN, ABRAHAM AND STERN, RONALD J.: Linear feedback, irreducibility, and *M*-matrices, **97**: 141–152 (1987)

BERMAN, ABRAHAM AND WARD, ROBERT C.: $\mathscr{ALPS}$: classes of stable and semipositive matrices, **21**: 163–174 (1978)

BEVIS, JEAN H., HALL, FRANK J., AND HARTWIG, ROBERT E.: The Drazin inverse of a semilinear transformation and its matrix representation, **97**: 229–242 (1987)

BEVIS, JEAN H., HALL, FRANK J., AND HARTWIG, ROBERT E., **90**: 73–80 (1987)

BEVIS, JEAN H., HALL, FRANK J., AND KATZ, IRVING J.: Integer generalized inverses of incidence matrices, **39**: 247–258 (1981)

BEVIS, JEAN H. AND HALL, FRANK J.: Some classes of integral matrices, **48**: 473–483 (1982)

BHATIA, RAJENDRA: On the rate of change of spectra of operators. II, **36**: 25–32 (1981)

BHATIA, RAJENDRA: Variation of symmetric tensor powers and permanents, **62**: 269–276 (1984)

BHATIA, RAJENDRA, DAVIS, CHANDLER, AND MCINTOSH, ALAN: Perturbation of spectral subspaces and solution of linear operator equations, **52**: 45–67 (1983)

BHATIA, RAJENDRA AND FRIEDLAND, SHMUEL: Variation of Grassmann powers and spectra, **40**: 1–18 (1981)

BHATIA, RAJENDRA AND HOLBROOK, JOHN A. R.: Unitary invariance and spectral variation, **95**: 43–68 (1987)

BHATIA, RAJENDRA AND MUKHERJEA, KALYAN K.: On the rate of change of spectra of operators, **27**: 147–157 (1979)

BHATTACHARYYA, S. P.: *See* de Souza, Eurice

BHATTACHARYYA, S. P., KEEL, L. H., AND HOWZE, J. W.: Stabilization of linear systems with fixed order controllers, **98**: 57–76 (1988)

BIALAS, S. AND GARLOFF, J.: Intervals of *P*-matrices and related matrices, **58**: 33–41 (1984)

BIEGLER-KONIG, FRIEDRICH W.: Construction of band matrices from spectral data, **40**: 79–87 (1981)

BIEGLER-KONIG, FRIEDRICH W.: Sufficient conditions for the solubility of inverse eigenvalue problems, **40**: 89–100 (1981)

BIER, THOMAS: A distribution invariant for association schemes and strongly regular graphs, **57**: 105–113 (1984)

BIERI, H. AND NEF, W.: A sweep-plane algorithm for computing the volume of polyhedra represented in Boolean form, **52**: 69–97 (1983)

BIGGS, NORMAN: Girth, valency, and excess, **31**: 55–59 (1980)

BINDING, PAUL: The inertia of a Hermitian pencil, **63**: 179–191 (1984)

BINI, DARIO: Border rank of $m \times n \times (mn - q)$ tensors, **79**: 45–51 (1986)

BINI, DARIO AND CAPOVANI, MILVIO: Spectral and computational properties of band symmetric Toeplitz matrices, **52**: 99–126 (1983)

BIRD, CHARLES G.: On the stability of a class of noncooperative games, **40**: 119–127 (1981)

BISTRITZ, YUVAL AND KAILATH, THOMAS: Inversion and factorization of non-Hermitian quasi-Toeplitz matrices, **98**: 77–121 (1988)

BITMEAD, ROBERT R. AND ANDERSON, BRIAN D. O.: Asymptotically fast solution of Toeplitz and related systems of linear equations, **34**: 103–116 (1980)

BIXBY, ROBERT E.: A simple theorem on 3-connectivity, **45**: 123–126 (1982)

BJORCK, A.: Stability analysis of the method of seminormal equations for linear least squares problems, **88**: 31–48 (1987)

BJORCK, A. AND DUFF, I. S.: A direct method for the solution of sparse linear least squares problems, **34**: 43–67 (1980)

BJORCK, AKE AND HAMMARLING, SVEN: A Schur method for the square root of a matrix, **52**: 127–140 (1983)

BLOKHUIS, A. AND SEIDEL, J. J.: Remark on Wielandt's visibility theorem, **71**: 29–30 (1985)

BODE, ALBERT: Symmetrien und Antisymmetrien der Robert'schen Quasiordnung in Matrizenraumen, **23**: 87–99 (1979)

BOJANCZYK, A. AND BRENT, R. P.: Parallel solution of certain Toeplitz least-squares problems: Special volume on parallel computing, **77**: 43–60 (1986)

BOJANCZYK, A. W.: Systolic implementation of the lattice algorithm for least squares linear prediction problems: Special volume on parallel computing, **77**: 27–42 (1986)

BOLLA, MICHAEL L.: Isomorphisms between infinite matrix rings, **69**: 239–247 (1985)

BOLZERN, PAOLO AND COLANERI, PATRIZIO: Inertia theorems for the periodic Lyapunov difference equation and periodic Riccati difference equation, **85**: 249–265 (1987)

BONDAR, JAMES V.: Convexity of acceptance regions of multivariate tests, **67**: 195–199 (1985)

BONE, TERRENCE: Positive feedback may sometimes promote stability, **51**: 143–151 (1983)

BOSE, N. K.: Matrix factorization in a real field, **11**: 21–25 (1975)

BOSE, N. K.: Robust multivariate scattering Hurwitz interval polynomials, **98**: 123–136 (1988)

BOTTA, PETER: Linear maps that preserve singular and nonsingular matrices, **20**: 45–49 (1978)

BOTTA, PETER AND WILLIAMSON, S. G.: Unitary similarity of symmetry operators, **3**: 249–256 (1970)

BOULLION, T. L.: *See* Pye, W. C.

BOYARSKY, ABRAHAM: *See* Friedman, Nathan

BOYD, DAVID W.: The power method for l^p norms, **9**: 95–101 (1974)

BRADLEY, GERALD LEE: The eigenvalue set of a class of equimodular matrices, **2**: 105–116 (1969)

BRAUER, ALFRED AND GENTRY, IVEY C.: Bounds for the greatest characteristic root of an irreducible nonnegative matrix. II: Collection of articles dedicated to Olga Taussky Todd, **13**: 109–114 (1976)

BRAUER, ALFRED AND GENTRY, IVEY C.: Bounds for the greatest characteristic root of an irreducible nonnegative matrix, **8**: 105–107 (1974)

BRAUER, ALFRED AND GENTRY, IVEY C.: Some remarks on tournament matrices, **5**: 311–318 (1972)

BRAUER, ALFRED T.: Alfred T. Brauer as a mathematician and teacher, **59**: 1–17 (1984)

BRAWLEY, J. V.: A note on polynomial matrix functions over a finite field, **28**: 35–38 (1979)

BRAWLEY, J. V., CARLITZ, L., AND LEVINE, JACK: Scalar polynomial functions on the $n \times n$ matrices over a finite field, **10**: 199–217 (1975)

BRAWLEY, J. V. AND CARLITZ, L.: Enumeration of matrices with prescribed row and column sums, **6**: 165–174 (1973)

BRAWLEY, J. V. AND GAMBLE, R. O.: Involutory matrices over finite commutative rings, **21**: 175–188 (1978)

BRAWLEY, J. V. AND HANKINS, MAX: On distribution by rank of bases for vector spaces of matrices over a finite field, **39**: 91–101 (1981)

BRAWLEY, J. V. AND SCHNIBBEN, GEORGE E.: Polynomials which permute the matrices over a field, **86**: 145–160 (1987)

BRAWLEY, JOEL, JR.: On the ranks of bases of vector spaces of matrices, **3**: 51–55 (1970)

BREBNER, M. A. AND GRAD, J.: Eigenvalues of $Ax = \lambda Bx$ for real symmetric matrices A and B computed by reduction to a pseudo-symmetric form and the HR process, **43**: 99–118 (1982)

BREMSER, PRISCILLA S.: A generalization of Gaussian sums to vector spaces over finite fields, **81**: 35–45 (1986)

BRENNER, J. L.: Applications of the Dieudonne determinant, **1**: 511–536 (1968)

BRENNER, J. L.: Corrections to "Applications of the Dieudonne determinant" (Linear Algebra and Appl. 1 (1968), 511 - 536), **13**: 289 (1976)

BRENNER, J. L. AND WANG, EDWARD T. H.: Permanental pairs of doubly stochastic matrices. II, **28**: 39–41 (1979)

BRENNER, JOEL: *See* de Pillis, John

BRENNER, JOEL LEE: The mathematical work of Joel Lee Brenner: With contributions by R. P. Boas, John de Pillis, Roger Lyndon, and James Wiegold, **90**: 1–13 (1987)

BRENT, R. P.: *See* Bojanczyk, A.

BRESINSKY, HENRIK: Minimal free resolutions of monomial curves in $\mathbb{P}_k^3$, **59**: 121–129 (1984)

BREWER, JAMES AND KLINGLER, LEE: Dynamic feedback over commutative rings, **98**: 137–168 (1988)

BREZINSKI, CLAUDE: Computation of the eigenelements of a matrix by the epsilon-algorithm, **11**: 7–20 (1975)

BREZINSKI, CLAUDE: Some results in the theory of the vector epsilon-algorithm, **8**: 77–86 (1974)

BRIDGES, W. G.: Algebraic duality theorems with combinatorial applications, **22**: 157–162 (1978)

BRIDGES, W. G. AND MENA, R. A.: On the rational spectra of graphs with abelian Singer groups, **46**: 51–60 (1982)

BRINKKEMPER, S.: *See* Axelsson, O.

BROADIE, MARK N.: A theorem about antiprisms, **66**: 99–111 (1985)

BROCKETT, R. W.: Linear feedback systems and the groups of Galois and Lie, **50**: 45–60 (1983)

BROCKETT, ROGER W. AND DOBKIN, DAVID: On the optimal evaluation of a set of bilinear forms, **19**: 207–235 (1978)

BROWNE, M. W.: The information matrix for image factor analysis, **70**: 51–59 (1985)

BROWNE, M. W. AND SHAPIRO, A.: The asymptotic covariance matrix of sample correlation coefficients under general conditions, **82**: 169–176 (1986)

BRUALDI, R. A. AND CSIMA, J.: Extremal plane stochastic matrices of dimension three, **11**: 105–133 (1975)

BRUALDI, R. A. AND HOFFMAN, A. J.: On the spectral radius of (0,1)-matrices, **65**: 133–146 (1985)

BRUALDI, R. A. AND SHANNY, R. F.: A set intersection problem, **9**: 143–147 (1974)

BRUALDI, RICHARD A.: Combinatorial verification of the elementary divisors of tensor products, **71**: 31–47 (1985)

BRUALDI, RICHARD A.: Matrices of zeros and ones with fixed row and column sum vectors, **33**: 159–231 (1980)

BRUALDI, RICHARD A.: The doubly stochastic matrices of a vector majorization, **61**: 141–154 (1984)

BRUALDI, RICHARD A. AND GIBSON, PETER M.: Convex polyhedra of doubly stochastic matrices. IV, **15**: 153–172 (1976)

BRUALDI, RICHARD A. AND HEDRICK, MARK B.: A unified treatment of nearly reducible and nearly decomposable matrices, **24**: 51–73 (1979)

BRUALDI, RICHARD A. AND LEE, GEOFFREY M.: On the truncated assignment polytope, **19**: 33–62 (1978)

BRUALDI, RICHARD A. AND LEWIN, MORDECHAI: On powers of nonnegative matrices, **43**: 87–97 (1982)

BRUALDI, RICHARD A. AND LI, QIAO: Small diameter interchange graphs of matrices of zeros and ones, **46**: 177–194 (1982)

BRUALDI, RICHARD A. AND ROSS, JEFFREY A.: On Ryser's maximum term rank formula, **29**: 33–38 (1980)

BRUALDI, RICHARD A. AND RYSER, H. J.: Classes of matrices associated with the optimal assignment problem, **81**: 1–17 (1986)

BRUALDI, RICHARD A. AND SOLHEID, ERNIE S.: On the minimum spectral radius of matrices of zeros and ones, **85**: 81–100 (1987)

BRUALDI, RICHARD A. AND WIELANDT, HELMUT W.: A spectral characterization of stochastic matrices, **1**: 65–72 (1968)

BRUCKSTEIN, A.: *See* Kailath, T.

BRUCKSTEIN, ALFRED AND KAILATH, THOMAS: Some matrix factorization identities for discrete inverse scattering, **74**: 157–172 (1986)

BRUEN, A. A. AND FREEMAN, J. W.: Intersections of t-reguli, rational curves, and orthogonal Latin squares, **46**: 103–116 (1982)

BRUNING, JOCHEN: Diagonalization of holomorphic functions with values in W^*-algebras, **56**: 131–138 (1984)

BRUNING, JOCHEN, KIM, KI HANG, AND ROUSH, FRED N.: On a conjecture of S. V. Phadke and N. K. Thakare: Generalized inverses and operator equations, **32**: 113–114 (1980) Appl. 23 (1979) 191–199; MR 80b:47017), **32**: 113–114 (1980)

BRUNO, JOHN AND WEINBERG, LOUIS: The principal minors of a matroid, **4**: 17–54 (1971)

BRYLAWSKI, TOM: Finite prime-field characteristic sets for planar configurations, **46**: 155–176 (1982)

BUCHI, WERNER AND CLAUSEN, MICHAEL: On a class of primary algebras of minimal rank, **69**: 249–268 (1985)

BUCKNER, HANS F.: A minimal property of the Jordan canonical form, **1**: 503–510 (1968)

BUNCE, JOHN W.: *See* Ando, T.

BUNCH, JAMES R.: The weak and strong stability of algorithms in numerical linear algebra, **88**: 49–66 (1987)

BUNCH, JAMES R. AND KAUFMAN, LINDA: A computational method for the indefinite quadratic programming problem, **34**: 341–370 (1980)

BUNSE-GERSTNER, A.: An algorithm for the symmetric generalized eigenvalue problem, **58**: 43–68 (1984)

BUNSE-GERSTNER, A.: An analysis of the HR algorithm for computing the eigenvalues of a matrix, **35**: 155–173 (1981)

BUNSE-GERSTNER, ANGELIKA: Matrix factorizations for symplectic *QR*-like methods, **83**: 49–77 (1986)

BUONI, J. J. AND SUBRAMANIAN, B.: A Stein-Rosenberg theorem for rectangular matrices, **48**: 177–190 (1982)

BUONI, JOHN J.: *See* Ahac, Alan A.

BUONI, JOHN J., NEUMANN, MICHAEL, AND VARGA, RICHARD S.: Theorems of Stein-Rosenberg type. III. The singular case, **42**: 183–198 (1982)

BURGOYNE, N. AND CUSHMAN, R.: The decomposition of a linear mapping, **8**: 515–519 (1974)

BURKILL, H. AND PERFECT, HAZEL: Leon Mirsky, 1918–1983, **61**: 1–10 (1984)

BURLANDO, LAURA: On two subsets of a Banach algebra that are related to the continuity of spectrum and spectral radius: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 251–269 (1986)

BURNS, FENNELL, FIEDLER, MIROSLAV, AND HAYNSWORTH, EMILIE: Polyhedral cones and positive operators, **8**: 547–559 (1974)

BUSH, K. A.: On Hadamard embeddability, **29**: 39–52 (1980)

BUSHELL, P. J.: On solutions of the matrix equation $T'AT = A^2$, **8**: 465–469 (1974)

BUSHELL, P. J.: The Cayley-Hilbert metric and positive operators: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 271–280 (1986)

BUTKOVIC, PETER, CECHLAROVA, KATAVINA, AND SZABO, PETER: Strong linear independence in bottleneck algebra, **94**: 133–155 (1987)

BUTLER, KIM KI-HANG: The number of idempotents in (0, 1)-matrix semigroups, **5**: 233–246 (1972)

BUTLER, P.: *See* Cantoni, A.

BUTLER, WILLIAM AND KAPLANSKY, IRVING: A curious property of three-by-three matrices and an application to orders, **6**: 269–272 (1973)

BUTTS, HUBERT S. AND ESTES, DENNIS: Modules and binary quadratic forms over integral domains, **1**: 153–180 (1968)

BUTZER, P. L. AND STENS, R. L.: The Euler-MacLaurin summation formula, the sampling theorem, and approximate integration over the real axis, **52**: 141–155 (1983)

BYERS, RALPH: Solving the algebraic Riccati equation with the matrix sign function, **85**: 267–279 (1987)

BYERS, V.: Non-Archimedean norms and bounds, **3**: 57–77 (1970)

BYERS, W.: Matrices induced by endomorphisms of finite sets, **93**: 81–92 (1987)

BYRD, KEN AND VAUGHAN, THERESA P.: A group of integral points in a matrix parallelepiped, **30**: 155–166 (1980)

BYRNES, CHRISTOPHER I.: On a theorem of Hermite and Hurwitz, **50**: 61–101 (1983)

CABRERA, JAVIER F. AND WATSON, GEOFFREY S.: The algebra of hyperboloids of revolution, **70**: 115–130 (1985)

CAFLISCH, RUSSEL E.: An inverse problem for Toeplitz matrices and the synthesis of discrete transmission lines, **38**: 207–225 (1981)

CAI, D. Y.: *See* Varga, R. S.

CAIN, B. E.: Corrections to: "Inertia theory" (Linear Algebra Appl. 30: 211–240 (1980), **42**: 285–286 (1982)

CAIN, BRYAN E.: Hermitian congruence for matrices with semidefinite real part and for H-stable matrices, **7**: 43–52 (1973)

CAIN, BRYAN E.: Inertia theory, **30**: 211–240 (1980)

CAIN, BRYAN E.: Inside the *D*-stable matrices, **56**: 237–243 (1984)

CAIN, BRYAN E.: The inertia of a Hermitian matrix having prescribed diagonal blocks, **37**: 173–180 (1981)

CAIN, BRYAN E.: *See* Bahl, Christina A.

CAIN, BRYAN E. AND MARQUES DE SA, E.: The inertia of a Hermitian matrix having prescribed complementary principal submatrices, **37**: 161–171 (1981)

CALDERBANK, ROBERT: A good method of combining codes, **32**: 115–124 (1980)

CALDERON, A.-P.: A note on biquadratic forms, **7**: 175–177 (1973)

CALOGERO, F.: Isospectral matrices and classical polynomials, **44**: 55–60 (1982)

CALOGERO, F. AND PERELOMOV, A. M.: Some Diophantine relations involving circular functions of rational angles, **25**: 91–94 (1979)

CAMERON, P. J. AND LIEBLER, R. A.: Tactical decompositions and orbits of projective groups, **46**: 91–102 (1982)

CAMPBELL, STEPHEN L.: Limit behavior of solutions of singular difference equations, **23**: 167–178 (1979)

CAMPBELL, STEPHEN L.: On continuity of the Moore-Penrose and Drazin generalized inverses, **18**: 53–57 (1977)

CAMPBELL, STEPHEN L. AND MEYER, CARL D., JR.: Continuity properties of the Drazin pseudoinverse, **10**: 77–83 (1975)

CAMPBELL, STEPHEN L. AND MEYER, CARL D., JR.: Weak Drazin inverses, **20**: 167–178 (1978)

CAMPBELL, STEPHEN L. AND POOLE, GEORGE D.: Computing nonnegative rank factorizations, **35**: 175–182 (1981)

CAMPOS, TANIA M. M. : *See* Micali, Artibano

CANTONI, A. AND BUTLER, P.: Eigenvalues and eigenvectors of symmetric centrosymmetric matrices, **13**: 275–288 (1976)

CAO, WEI LU AND STEWART, WILLIAM J.: A note on inverses of Hessenberg-like matrices, **76**: 233–240 (1986)

CAO, ZHI HAO: On a deflation method for the symmetric generalized eigenvalue problem, **92**: 187–196 (1987)

CAO, ZHI HAO: Residual error bounds of generalized eigenvalue systems, **93**: 113–120 (1987)

CAO, ZHI HAO AND ZHANG, YIN: The contraction number of a multigrid method with mesh ratio two for solving model problems, **79**: 23–32 (1986)

CAPOVANI, MILVIO: *See* Bini, Dario

CARLITZ, L.: *See* Brawley, J. V.

CARLITZ, L. AND HODGES, JOHN H.: Enumeration of matrices of given rank with submatrices of given rank, **16**: 285–291 (1977)

CARLSON, DAVID: A new criterion for H-stability of complex matrices, **1**: 59–64 (1968)

CARLSON, DAVID: Controllability, inertia, and stability for tridiagonal matrices, **56**: 207–220 (1984)

CARLSON, DAVID: Generalizations of matrix monotonicity: Collection of articles dedicated to Olga Taussky Todd, **13**: 125–131 (1976)

CARLSON, DAVID: Inequalities for the degrees of elementary divisors of modules, **5**: 293–298 (1972)

CARLSON, DAVID: Minimax and interlacing theorems for matrices, **54**: 153–172 (1983)

CARLSON, DAVID: What are Schur complements, anyway?, **74**: 257–275 (1986)

CARLSON, DAVID AND HAYNSWORTH, EMILIE V.: Complementable and almost definite matrices, **52**: 157–176 (1983)

CARLSON, DAVID AND HILL, RICHARD: Generalized controllability and inertia theory, **15**: 177–187 (1976)

CARLSON, DAVID AND LOEWY, RAPHAEL: On equality of maps induced by alternate products, **47**: 89–110 (1982)

CARLSON, DAVID AND LOEWY, RAPHAEL: On ranges of Lyapunov transformations, **8**: 237–248 (1974)

CARLSON, DAVID, MARKHAM, THOMAS L., AND UHLIG, FRANK: Emilie Haynsworth, 1916–1985, **75**: 269–276 (1986)

CARLSON, DAVID AND PIERCE, STEPHEN: Common eigenvectors and quasicommutativity of sets of simultaneously triangularizable matrices, **71**: 49–55 (1985)

CARLSON, DAVID H. AND DATTA, BISWA NATH: The Lyapunov matrix equation $SA + A^*S = S^*B^*BS$, **28**: 43–52 (1979)

CARLSON, DAVID H. AND VARGA, RICHARD S.: Minimal G-functions. I, II, **6**: 97–117; ibid. 7 (1973), 233–242 (1973)

CARLSON, DAVID H. AND VARGA, RICHARD S.: On collections of G-functions, **8**: 65–76 (1974)

CARLSON, R. E.: A note on intrinsic functions, **5**: 393–396 (1972)

CARON, R. J. AND GOULD, N. I. M.: Finding a positive semidefinite interval for a parametric matrix, **76**: 19–29 (1986)

CATER, F. S.: Products of central collineations, **19**: 251–274 (1978)

CAVARETTA, A. S., JR., DAHMEN, W. A., MICCHELLI, C. A., AND SMITH, P. W.: A factorization theorem for banded matrices, **39**: 229–245 (1981)

CECHLAROVA, KATAVINA: *See* Butkovic, Peter

CENSOR, YAIR: *See* Berman, Abraham

CENSOR, YAIR AND ELFVING, TOMMY: New methods for linear inequalities, **42**: 199–211 (1982)

CHABRILLAC, YVES AND CROUZEIX, J.-P.: Definiteness and semidefiniteness of quadratic forms revisited, **63**: 283–292 (1984)

CHAKRAVARTI, INDRA-MOHAN: On a characterization of irreducibility of a non-negative matrix, **10**: 103–109 (1975)

CHALKLEY, ROGER: Information about group matrices, **38**: 121–133 (1981)

CHAN, G. H. AND LIM, M. H.: A conjecture involving generalized matrix functions, **36**: 157–163 (1981)

CHAN, G. H. AND LIM, M. H.: Linear transformations on symmetric matrices that preserve commutativity, **47**: 11–22 (1982)

CHAN, GIN HOR: (k)-characters and the triviality of symmetry classes, **25**: 139–149 (1979)

CHAN, GIN-HOR, LIM, MING HUAT, AND TAN, KOK-KEONG: Linear preservers on matrices, **93**: 67–80 (1987)

CHAN, N. N. AND MAK, T. K.: Estimation in multivariate errors-in-variables models, **70**: 197–207 (1985)

CHAN, TONY F.: Rank revealing QR factorizations, **88**: 67–82 (1987)

CHAN, TONY F. AND RESASCO, DIANA C.: On the condition of nearly singular matrices under rank-1 perturbations, **76**: 223–232 (1986)

CHANDRASEKARAN, R.: *See* Truemper, K.

CHANG, GENG ZHE AND DAVIS, PHILIP J.: A circulant formulation of the Napoleon-Douglas-Neumann theorem, **54**: 87–95 (1983)

CHANG, SIN CHUNG: Generalizations of two inequalities involving Hermitian forms, **65**: 179–187 (1985)

CHANG, SIN CHUNG: On the product of convex combinations and the Kantorovich inequality, **93**: 9–38 (1987)

CHAO, CHONG YUN: On a type of circulants, **6**: 241–248 (1973)

CHAO, CHONG YUN: On some sets of permutation matrices, **45**: 131–134 (1982)

CHAO, CHONG-YUN: A remark on cyclic matrices, **3**: 165–172 (1970)

CHAO, CHONG YUN AND ZHANG, MOU CHENG: On generalized circulants over a Boolean algebra, **62**: 195–206 (1984)

CHARI, BHAGYA AND HOCHSTADT, HARRY: A direct and inverse problem for a Hill's matrix with double eigenvalues, **52**: 177–197 (1983)

CHARLIER, J.-P. AND VAN DOOREN, P.: On Kogbetliantz's SVD algorithm in the presence of clusters, **95**: 135–160 (1987)

CHARNES, A., GRANOT, DANIEL, AND GRANOT, FRIEDA: A primal algorithm for interval linear-programming problems, **17**: 65–78 (1977)

CHATELIN, FRANCOISE AND MIRANKER, WILLARD L.: Acceleration by aggregation of successive approximation methods, **43**: 17–47 (1982)

CHAZAN, D. AND MIRANKER, W.: Chaotic relaxation, **2**: 199–222 (1969)

CHEN, DAO QI: An invariant deflation for lower banded matrices, **49**: 237–245 (1983)

CHEN, GONG NING: Note on lower bounds for the rank of a matrix, **55**: 125–132 (1983)

CHEN, GONG NING: On some properties of singular matrices, **49**: 137–151 (1983)

CHEN, GONG NING: Some generalizations of diagonal dominance associated with G-functions, **55**: 169–180 (1983)

CHEN, JI CHENG: The nonnegative rank factorizations of nonnegative matrices, **62**: 207–217 (1984)

CHENG, SUI-SUN: Discrete quadratic Wirtinger's inequalities, **85**: 57–73 (1987)

CHENG, SUI-SUN, LI, HORNG JAAN, LU, TZON-TZER, AND WU, SHU HEI: Regular and singular orthants of tridiagonal matrices, **94**: 181–191 (1987)

CHENG, SUI SUN AND LU, TZON TZER: Convex regular domains of tridiagonal matrices, **79**: 103–125 (1986)

CHERN, I.-L.: *See* Miranker, W. L.

CHETTY, C. S. K.: *See* Rathore, R. K. S.

CHEUNG, SHIU MING AND HOCHSTADT, HARRY: An inverse spectral problem, **12**: 215–222 (1975)

CHIKUSE, YASUKO: Multivariate Meixner classes of invariant distributions, **82**: 177–200 (1986)

CHILLAG, DAVID: Generalized circulants and class functions of finite groups, **93**: 191–208 (1987)

CHING, WAI SIN: Linear equations over commutative rings, **18**: 257–266 (1977)

CHOI, M. D., JAFARIAN, A. A., AND RADJAVI, H.: Linear maps preserving commutativity, **87**: 227–241 (1987)

CHOI, MAN DUEN: Completely positive linear maps on complex matrices, **10**: 285–290 (1975)

CHOI, MAN DUEN: Positive semidefinite bequadratic forms, **12**: 95–100 (1975)

CHOUDHURY, DIPA, HORN, ROGER A., AND PIERCE, STEPHEN J.: Quasi-positive definite operators and matrices, **99**: 161–176 (1988)

CHRISTENSEN, JENS PETER REUS AND FISCHER, PAL: Positive definite doubly stochastic matrices and extreme points, **82**: 123–132 (1986)

CHRISTIAN, FLOYD L., JR.: A k-measure of irreducibility and doubly stochastic matrices, **24**: 225–237 (1979)

CHU, KING-WAH ERIC: Singular value and generalized singular value decompositions and the solution of linear matrix equations, **88**: 83–98 (1987)

CHU, KING-WAH ERIC: The solution of the matrix equations $AXB - CXD = E$ and $(YA - DZ, YC - BZ) = (E, F)$, **93**: 93–105 (1987)

CHU, MOODY: A continuous approximation to the generalized Schur decomposition, **78**: 119–132 (1986)

CHU, MOODY T.: A differential equation approach to the singular value decomposition of bidiagonal matrices, **80**: 71–79 (1986)

CHU, MOODY T.: A simple application of the homotopy method to symmetric eigenvalue problems, **59**: 85–90 (1984)

CHUNG, J. K., KANNAPPAN, PL., AND NG, C. T.: A generalization of the cosine-sine functional equation on groups, **66**: 259–277 (1985)

CIAMPI, RITA: Characterization of a class of matrices as sums of squares, **3**: 45–50 (1970)

CIARLET, P. G.: Some results in the theory of nonnegative matrices, **1**: 139–152 (1968)

CLAASEN, H. L.: The multiplications in $GF(q)(x)/(a(x))$ considered as linear transformations, **22**: 105–123 (1978)

CLAESSENS, GUIDO: On the location of the zeros of a generalized polynomial, **22**: 79–88 (1978)

CLARK, KENNETH D.: A structural form for higher-index semistate equations. I. Theory and applications to circuit and control theory, **98**: 169–197 (1988)

CLAUSEN, MICHAEL: *See* Buchi, Werner

CLINE, R. E. AND FUNDERLIC, R. E.: The rank of a difference of matrices and associated generalized inverses, **24**: 185–215 (1979)

CLINE, R. E., PLEMMONS, R. J., AND WORM, G.: Generalized inverses of certain Toeplitz matrices, **8**: 25–33 (1974)

CLINE, RANDALL E.: Note on an extension of the Moore-Penrose inverse, **40**: 19–23 (1981)

CLINE, RANDALL E. AND GREVILLE, T. N. E.: A Drazin inverse for rectangular matrices, **29**: 53–62 (1980)

CLINE, RANDALL E. AND MCCONNEL, ROBERT M.: Extensions of the Levine-Nahikian method for constructing involutory matrices, **57**: 247–270 (1984)

COBHAM, ALAN: Stochastic automata with large state spaces and low rank, **75**: 57–66 (1986)

COHEN, A. M.: A note on pivot size in Gaussian elimination, **8**: 361–368 (1974)

COHEN, JOEL E.: Perturbation theory of completely mixed matrix games, **79**: 153–162 (1986)

COHEN, JOEL E., FRIEDLAND, SHMUEL, KATO, TOSIO, AND KELLY, FRANK P.: Eigenvalue inequalities for products of matrix exponentials, **45**: 55–95 (1982)

COHEN, JOEL E. AND SELLERS, PETER H.: Sets of nonnegative matrices with positive inhomogeneous products, **47**: 185–192 (1982)

COHEN, NIR: Polynomial systems and Kronecker invariants, **87**: 257–265 (1987)

COHN, HARVEY: Ternary forms as invariants of Markoff forms and other $SL_2(Z)$-bundles, **21**: 3–12 (1978)

COLANERI, PATRIZIO: *See* Bolzern, Paolo

COLLATZ, LOTHAR: Lothar Collatz—on the occasion of his 75th birthday, **68**: vi, 1–8 (1985)

COLLOMBIER, D.: *See* El Mossadeq, A.

CONCEICAO SILVA, F.: Matrices with prescribed eigenvalues and principal submatrices, **92**: 241–250 (1987)

CONCEICAO SILVA, F.: On the number of invariant polynomials of the matrix $XAX^{-1} + B$, **79**: 1–21 (1986)

CONNER, LUTHER T., JR. AND STANFORD, DAVID P.: The structure of the controllable set for multimodal systems, **95**: 171–180 (1987)

CONRADIE, W. J.: *See* Troskie, C. G.

CONSONNI, G. AND DAWID, A. P.: Decomposition and Bayesian analysis of invariant normal linear models, **70**: 21–49 (1985)

CONSTANTINE, GREGORY: Lower bounds on the spectra of symmetric matrices with nonnegative entries, **65**: 171–178 (1985)

CONWAY, J. B. AND HALMOS, P. R.: Finite-dimensional points of continuity of Lat, **31**: 93–102 (1980)

CONWAY, JOHN B.: Finite-dimensional points of continuity of Gen and Com, **35**: 121–127 (1981)

COOK, P. A.: Estimates for the inverse of a matrix, **10**: 41–53 (1975)

COPPEL, W. A.: Linear systems: some algebraic aspects, **40**: 257–273 (1981)

CORDES, CRAIG M.: A note on Pall partitions over finite fields, **12**: 81–85 (1975)

CORDOVIL, RAUL: Polarity and point extensions in oriented matroids, **90**: 15–31 (1987)

CORDOVIL, RAUL AND SILVA, ILDA P.: Determining a matroid polytope by non-Radon partitions, **94**: 55–60 (1987)

COSTA E SILVA, MARIA C.: *See* Micali, Artibano

COTTLE, R. W., HABETLER, G. J., AND LEMKE, C. E.: On classes of copositive matrices, **3**: 295–310 (1970)

COTTLE, RICHARD W.: Manifestations of the Schur complement, **8**: 189–211 (1974)

COTTLE, RICHARD W. AND DANTZIG, GEORGE B.: Complementary pivot theory of mathematical programming, **1**: 103–126 (1968)

COTTLE, RICHARD W. AND FERLAND, JACQUES A.: Matrix-theoretic criteria for the quasi-convexity and pseudo-convexity of quadratic functions, **5**: 123–136 (1972)

COTTLE, RICHARD W., VON RANDOW, RABE, AND STONE, RICHARD E.: On spherically convex sets and Q-matrices, **41**: 73–80 (1981)

COURTER, R. C.: Maximal commutative subalgebras of K_n at exponent three, **6**: 1–11 (1973)

COURTOIS, P.-J. AND SEMAL, P.: Block iterative algorithms for stochastic matrices, **76**: 59–70 (1986)

COURTOIS, P.-J. AND SEMAL, P.: On polyhedra of Perron-Frobenius eigenvectors, **65**: 157–170 (1985)

COXSON, PAMELA G.: *See* Lou, Sheldon X.-C.

COXSON, PAMELA G., LARSON, LOREN C., AND SCHNEIDER, HANS: Monomial patterns in the sequence $A^k b$, **94**: 89–101 (1987)

COXSON, PAMELA G. AND SHAPIRO, HELENE: Positive input reachability and controllability of positive systems, **94**: 35–53 (1987)

CRABTREE, DOUGLAS E.: *See* Bailey, Duane W.

CRAGNOLINI, P.: *See* Benedetti, R.

CRAVEN, B. D. AND MOND, B.: Linear programming with matrix variables, **38**: 73–80 (1981)

CRAWFORD, C. R. AND MOON, YIU SANG: Finding a positive definite linear combination of two Hermitian matrices, **51**: 37–48 (1983)

CRONE, LAWRENCE: Second order adjoint matrix equations, **39**: 61–71 (1981)

CROSS, G. W.: Three types of matrix stability, **20**: 253–263 (1978)

CROUZEIX, J.-P.: *See* Chabrillac, Yves

CRUSE, ALLAN B.: A proof of Fulkerson's characterization of permutation matrices, **12**: 21–28 (1975)

CRUSE, ALLAN B.: On removing a vertex from the assignment polytope, **26**: 45–57 (1979)

CRUSE, ALLAN B.: Some combinatorial properties of centrosymmetric matrices, **16**: 65–77 (1977)

CRYER, COLIN W.: Some properties of totally positive matrices, **15**: 1–25 (1976)

CRYER, COLIN W.: The *LU*-factorization of totally positive matrices, **7**: 83–92 (1973)

CSIMA, J.: *See* Brualdi, R. A.

CULLEN, C. G.: *See* Long, J. P.

CULLUM, JANE AND WILLOUGHBY, RALPH A.: The Lanczos phenomenon—an interpretation based upon conjugate gradient optimization, **29**: 63–90 (1980)

CUNNINGHAM, W. H.: An unbounded matroid intersection polyhedron, **16**: 209–215 (1977)

CUNNINGHAM, WILLIAM H.: Separating cocircuits in binary matroids, **43**: 69–86 (1982)

CURTIS, W. D., LOGAN, J. DAVID, AND PARKER, W. A.: Dimensional analysis and the pi theorem, **47**: 117–126 (1982)

CUSHMAN, R.: *See* Burgoyne, N.

CVETKOVIC, DRAGOSH: *See* Doob, Michael

CYBENKO, GEORGE: An explicit formula for Lanczos polynomials, **88**: 99–115 (1987)

DAHLQUIST, GERMUND: On matrix majorants and minorants, with applications to differential equations, **52**: 199–216 (1983)

DAHMEN, W. A.: *See* Cavaretta, A. S., Jr.

DAHMEN, WOLFGANG AND MICCHELLI, CHARLES A.: Translates of multivariate splines, **52**: 217–234 (1983)

DAMHUS, TURE: Complex conjugation of group representations by inner automorphisms, **32**: 125–135 (1980)

DANCIS, JEROME: A quantitative formulation of Sylvester's law of inertia. III, **80**: 141–158 (1986)

DANCIS, JEROME: The possible inertias for a Hermitian matrix and its principal submatrices, **85**: 121–151 (1987)

DANCIS, JEROME AND DAVIS, CHANDLER: An interlacing theorem for eigenvalues of selfadjoint operators, **88**: 117–122 (1987)

DANIEL, JAMES W. AND PALMER, THEODORE W.: On $\sigma(T)$, $\|T\|$, and $\|T^{-1}\|$, **2**: 381–386 (1969)

DANTZIG, GEORGE B.: *See* Cottle, Richard W.

DA PROVIDENCIA, J.: *See* Bebiano, Natalia

DA PROVIDENCIA, J. AND BEBIANO, N.: Matrices satisfying a conjecture of G. N. de Oliveira on determinants, **78**: 187–198 (1986)

DA PURIFICACAO COELHO, MA.: *See* Dias da Silva, J. A.

DAS, K. C. AND EMBRY-WARDROP, MARY: Orthogonality and the numerical range. II, **30**: 63–67 (1980)

DASS, BAL KISHAN: *See* Sharma, Bhu Dev

DATTA, B. N.: An elementary proof of the stability criterion of Lienard and Chipart, **22**: 89–96 (1978)

DATTA, B. N.: Generalized Hankel matrices of Markov parameters and their applications to control problems, **62**: 139–154 (1984)

DATTA, B. N.: On the Routh-Hurwitz-Fujiwara and the Schur-Cohn-Fujiwara theorems for the root-separation problem, **22**: 235–245 (1978)

DATTA, B. N. AND DATTA, KARABI: An algorithm for computing powers of a Hessenberg matrix and its applications, **14**: 273–284 (1976)

DATTA, BISWA NATH: Stability and D-stability, **21**: 135–141 (1978)

DATTA, BISWA NATH: *See* Carlson, David H.

DATTA, BISWA NATH AND DATTA, KARABI: The matrix equation $XA = A^TX$ and an associated algorithm for solving the inertia and stability problems, **97**: 103–119 (1987)

DATTA, KARABI: *See* Datta, Biswa Nath

DAUGHTRY, JOHN: Isolated solutions of quadratic matrix equations, **21**: 89–94 (1978)

DAVIES, ROY O. AND MODI, J. J.: A direct method for completing eigenproblem solutions on a parallel computer: Special volume on parallel computing, **77**: 61–74 (1986)

DAVILA, NORBIL: *See* Barker, G. P.

DAVIS, CHANDLER: An extremal problem for extensions of a sesquilinear form: Collection of articles dedicated to Olga Taussky Todd, **13**: 91–102 (1976)

DAVIS, CHANDLER: Explicit functional calculus, **6**: 193–199 (1973)

DAVIS, CHANDLER: Extending the Kantorovich inequality to normal matrices, **31**: 173–177 (1980)

DAVIS, CHANDLER: Geometric approach to a dilation theorem, **18**: 33–43 (1977)

DAVIS, CHANDLER: Representing a commuting pair by tensor products, **3**: 355–357 (1970)

DAVIS, CHANDLER: The change of the Jordan structure of a matrix under small perturbations: Translated from the Russian by Chandler Davis, **54**: 139–152 (1983)

DAVIS, CHANDLER: *See* Bhatia, Rajendra

DAVIS, CHANDLER: *See* Dancis, Jerome

DAVIS, DANIEL L. AND ROBINSON, DONALD W.: Generalized inverses of morphisms, **5**: 319–328 (1972)

DAVIS, PHILIP J.: Cyclic transformations of n-gons and related quadratic forms, **25**: 57–75 (1979)

DAVIS, PHILIP J.: *See* Chang, Geng Zhe

DAVIS, PHILIP J.: *See* Najfeld, Igor

DAWID, A. P.: *See* Consonni, G.

DE BOOR, C. AND GOLUB, G. H.: The numerically stable reconstruction of a Jacobi matrix from spectral data, **21**: 245–260 (1978)

DE BOOR, C., JIA, RONG QING, AND PINKUS, A.: Structure of invertible (bi)infinite totally positive matrices, **47**: 41–55 (1982)

DE BOOR, CARL AND PINKUS, ALLAN: The approximation of a totally positive band matrix by a strictly banded totally positive one, **42**: 81–98 (1982)

DE BOOR, CARL AND SAFF, EDWARD B.: Finite sequences of orthogonal polynomials connected by a Jacobi matrix, **75**: 43–55 (1986)

DE BRUIJN, N. G.: Remarks on Hermitian matrices, **32**: 201–208 (1980)

DE BRUIN, MARCEL G.: Some explicit formulae in simultaneous Pade approximation, **63**: 271–281 (1984)

DE CAEN, D. AND GREGORY, D. A.: Primes in the semigroup of Boolean matrices, **37**: 119–134 (1981)

DE GROEN, PIETER P. N.: The construction of an accurate lower bound for the real parts of the eigenvalues of an M-matrix, **43**: 161–166 (1982)

DE GROOTE, HANS F. AND HEINTZ, JOOS: Commutative algebras of minimal rank, **55**: 37–68 (1983)

DE HOOG, FRANK: A new algorithm for solving Toeplitz systems of equations, **88**: 123–138 (1987)

DE OLIVEIRA, G. N.: Matrices with prescribed characteristic polynomial and principal blocks. II, **47**: 35–40 (1982)

DE OLIVEIRA, G. N.: Note on the characteristic roots of tournament matrices, **8**: 271–272 (1974)

DE OLIVEIRA, G. N.: On the characteristic vectors of a matrix, **5**: 189–196 (1972)

DE OLIVEIRA, G. N. AND DIAS DA SILVA, J. A.: Conditions for equality of decomposable symmetric tensors. II, **28**: 161–176 (1979)

DE OLIVEIRA, G. N. AND DIAS DA SILVA, J. A.: Equality of decomposable symmetrized tensors and *-matrix groups, **49**: 191–219 (1983)

DE PIERRO, ALVARO R. AND IUSEM, ALFREDO N.: A simultaneous projections method for linear inequalities, **64**: 243–253 (1985)

DE PILLIS, J.: *See* Niethammer, W.

DE PILLIS, JOHN: How to embrace your spectrum for faster iterative results, **34**: 125–143 (1980)

DE PILLIS, JOHN: Inequalities for partitioned positive semidefinite matrices, **4**: 79–94 (1971)

DE PILLIS, JOHN AND BRENNER, JOEL: Generalized elementary symmetric functions and quaternion matrices, **4**: 55–69 (1971)

DE SOUZA, EURICE AND BHATTACHARYYA, S. P.: Controllability and the linear equation $Ax = b$, **36**: 97–101 (1981)

DE SOUZA, EURICE AND BHATTACHARYYA, S. P.: Controllability, observability and the solution of $AX - XB = C$, **39**: 167–188 (1981)

DE VRIES, HANS LUDWIG: *See* Kress, Rainer

DEDDENS, J. A. AND FILLMORE, P. A.: Reflexive linear transformations, **10**: 89–93 (1975)

DEEDS, JOSEPH B.: Uniqueness of symmetric norms for matrix rings, **5**: 383–391 (1972)

DEHESA, JESUS S.: The eigenvalue density of rational Jacobi matrices. II, **33**: 41–55 (1980)

DEIFT, P. AND NANDA, T.: On the determination of a tridiagonal matrix from its spectrum and a submatrix, **60**: 43–55 (1984)

DEKKER, T. J. AND TRAUB, J. F.: The shifted QR algorithm for Hermitian matrices, **4**: 137–154 (1971)

DELLA-DORA, J.: Numerical linear algorithms and group theory, **10**: 267–283 (1975)

DELLA DORA, JEAN AND ROBERT, FRANCOIS: Noel Gastinel and computational mathematics, **78**: 237–247 (1986)

DELOSME, JEAN-MARC: *See* Genin, Yves

DELOSME, JEAN-MARC AND IPSEN, ILSE C. F.: Parallel solution of symmetric positive definite systems with hyperbolic rotations: Special volume on parallel computing, **77:** 75–111 (1986)

DELSARTE, P., GENIN, Y., AND KAMP, Y.: On the Toeplitz embedding of an arbitrary matrix, **51:** 97–119 (1983)

DELSARTE, PH., GENIN, Y., AND KAMP, Y.: A method of matrix inverse triangular decomposition based on contiguous principal submatrices, **31:** 199–212 (1980)

DEMKO, STEPHEN: Condition numbers of rectangular systems and bounds for generalized inverses, **78:** 199–206 (1986)

DEMKO, STEPHEN: Surjectivity and invertibility properties of totally positive matrices, **45:** 13–20 (1982)

DEMMEL, JAMES WELDON: Computing stable eigendecompositions of matrices, **79:** 163–193 (1986)

DEMMEL, JAMES WELDON AND KAGSTROM, BO: Computing stable eigendecompositions of matrix pencils, **88:** 139–186 (1987)

DENMAN, EUGENE D.: Roots of real matrices, **36:** 133–139 (1981)

DENNIS, J. E., JR. AND TURNER, KATHRYN: Generalized conjugate directions, **88:** 187–209 (1987)

DEPRIMA, C. R. AND JOHNSON, C. R.: The range of $A^{-1}A^*$ in $GL(n, C)$, **9:** 209–222 (1974)

DEUFLHARD, P. AND SAUTTER, W.: On rank-deficient pseudoinverses, **29:** 91–111 (1980)

DEUTSCH, E.: *See* Bauer, F. L.

DEUTSCH, E., HADELER, K. P., AND LAFFEY, T. J.: Helmut Wielandt, **71:** 1–8 (1985)

DEUTSCH, EMERIC: Matricial norms and the zeros of lacunary polynomials, **6:** 143–148 (1973)

DEUTSCH, EMERIC: Matricial norms and the zeros of polynomials, **3:** 483–489 (1970)

DEUTSCH, EMERIC: Nonnegative spectraloid matrices, **39:** 149–154 (1981)

DEUTSCH, EMERIC: On certain generalized matrix norms, **29:** 113–129 (1980)

DEUTSCH, EMERIC: On the spread of matrices and polynomials, **22:** 49–55 (1978)

DEUTSCH, EMERIC: Relatively bounded matrix sets, minimal matrix norms and numerical ranges, **8:** 447–457 (1974)

DEUTSCH, EMERIC: Semi-inverses, reflexive semi-inverses, and pseudo-inverses of an arbitrary linear transformation, **4:** 313–322 (1971)

DEUTSCH, EMERIC, GIBSON, P. M., AND SCHNEIDER, HANS: The Fuglede-Putnam theorem and normal products of matrices: Collection of articles dedicated to Olga Taussky Todd, **13:** 53–58 (1976)

DEUTSCH, EMERIC AND MLYNARSKI, MAX: Matricial logarithmic derivatives, **19:** 17–31 (1978)

DEUTSCH, EMERIC AND NEUMANN, MICHAEL: On the first and second order derivatives of the Perron vector, **71:** 57–76 (1985)

DEUTSCH, EMERIC AND SCHNEIDER, HANS: Bounded groups and norm-Hermitian matrices, **9:** 9–27 (1974)

DEUTSCH, EMERIC AND WIELANDT, HELMUT: Nested bounds for the Perron root of a nonnegative matrix, **52:** 235–251 (1983)

DEWILDE, PATRICK: *See* Van Dooren, Paul

DEZA, M. AND ROSENBERG, I. G.: Generalized intersection patterns and two-symbol balanced arrays, **30:** 9–40 (1980)

DIAS DA SILVA, J. A.: Conditions for equality of decomposable symmetric tensors, **24:** 85–92 (1979)

DIAS DA SILVA, J. A.: Irreducible representations of the full linear group, **40:** 161–182 (1981)

DIAS DA SILVA, J. A.: On the multiplicative inverse eigenvalue problem, **78:** 133–145 (1986)

DIAS DA SILVA, J. A.: *See* de Oliveira, G. N.

DIAS DA SILVA, J. A. AND DA PURIFICACAO COELHO, MA.: Linear groups associated with elements of a group algebra, **94:** 165–179 (1987)

DIAS DA SILVA, J. A. AND FONSECA, AMELIA: Vector colorability, **94:** 67–88 (1987)

DICKINSON, BRADLEY W.: An inverse problem for Toeplitz matrices, **59:** 79–83 (1984)

DIXON, JOHN D.: Nilpotence and local nilpotence of linear groups: Collection of articles dedicated to Olga Taussky Todd, **13:** 59–67 (1976)

DIXON, JOHN D.: On duality theorems, **39**: 223–227 (1981)

DJAFERIS, T. E. AND MITTER, S. K.: Algebraic methods for the study of some linear matrix equations, **44**: 125–142 (1982)

DJAFERIS, T. E. AND MITTER, S. K.: Some generic invariant factor assignment results using dynamic output feedback, **50**: 103–131 (1983)

DJOKOVIC, D. ZH.: On the similarity between a linear transformation and its adjoint, **6**: 155–158 (1973)

DJOKOVIC, D. ZH. AND MALZAN, J.: Orbits of nilpotent matrices, **32**: 157–158 (1980)

DJOKOVIC, DRAGOMIR Z.: Relations between the half turns of the hyperbolic plane, **47**: 57–88 (1982)

DJOKOVIC, DRAGOMIR ZH.: Characterization of Hermitian and skew-Hermitian maps between matrix algebras, **12**: 165–170 (1975)

DJOKOVIC, DRAGOMIR ZH.: Classification of pairs consisting of a linear and a semilinear map, **20**: 147–165 (1978)

DJOKOVIC, DRAGOMIR ZH.: Positive semi-definite matrices as sums of squares, **14**: 37–40 (1976)

DJOKOVIC, DRAGOMIR ZH.: Relations between reflections in the unitary group and Hermitian hyperquadrics in the complex projective space, **35**: 129–153 (1981)

DJOKOVIC, DRAGOMIR ZH. AND MALZAN, JERRY: Products of reflections in the general linear group over a division ring, **28**: 53–62 (1979)

DLAB, VLASTIMIL AND RINGEL, CLAUS MICHAEL: A remark on normal forms of matrices, **30**: 109–114 (1980)

DLAB, VLASTIMIL AND RINGEL, CLAUS MICHAEL: Normal forms of real matrices with respect to complex similarity, **17**: 107–124 (1977)

DOBKIN, DAVID: *See* Brockett, Roger W.

DON, F. J. HENK: On the symmetric solutions of a linear matrix equation, **93**: 1–7 (1987)

DON, F. J. HENK: The use of generalized inverses in restricted maximum likelihood, **70**: 225–240 (1985)

DON, F. J. HENK AND VAN DER PLAS, ADRIAAN P.: A note on the characteristic polynomial of the commutation matrix, **37**: 135–142 (1981)

DONALD, JOHN, ELWIN, JOHN, HAGER, RICHARD, AND SALAMON, PETER: A graph theoretic upper bound on the permanent of a nonnegative integer matrix. I, **61**: 187–198 (1984)

DONALD, JOHN, ELWIN, JOHN, HAGER, RICHARD, AND SALAMON, PETER: A graph theoretic upper bound on the permanent of a nonnegative integer matrix. II. The extremal case, **61**: 199–218 (1984)

DONGARRA, J. J., GABRIEL, J. R., KOELLING, D. D., AND WILKINSON, J. H.: The eigenvalue problem for Hermitian matrices with time reversal symmetry, **60**: 27–42 (1984)

DONGARRA, JACK J., KAUFMAN, LINDA, AND HAMMARLING, SVEN: Squeezing the most out of eigenvalue solvers on high-performance computers: Special volume on parallel computing, **77**: 113–136 (1986)

DONNELLY, J. D. P.: Periodic chaotic relaxation, **4**: 117–128 (1971)

DOOB, MICHAEL: A spectral characterization of the line graph of a BIBD with $\lambda = 1$, **12**: 11–20 (1975)

DOOB, MICHAEL: A surprising property of the least eigenvalue of a graph, **46**: 1–7 (1982)

DOOB, MICHAEL: On characterizing certain graphs with four eigenvalues by their spectra, **3**: 461–482 (1970)

DOOB, MICHAEL AND CVETKOVIC, DRAGOSH: On spectral characterizations and embeddings of graphs, **27**: 17–26 (1979)

DOS SANTOS LEAL, LIARA APARECIDA: *See* Ruiz Claeyssen, Julio Cesar

DOW, STEPHEN J. AND GIBSON, PETER M.: Permanents of d-dimensional matrices, **90**: 133–145 (1987)

DOWNS, T.: A degree property of rational matrices, **72**: 73–84 (1985)

DOWNS, T.: On the inversion of a matrix of rational functions, **4**: 1–10 (1971)

DRAKE, DAVID A. AND SANE, SHARAD S.: Auxiliary sets of matrices with new step parameter sequences, **46**: 131–153 (1982)

DRUCKER, DANIEL: *See* Greenfield, Gary R.

DRURY, S. W.: Extreme points for positive forms on l^p, **97**: 219–228 (1987)

DRYGAS, HILMAR: A note on the inverse-partitioned-matrix method in linear regression analysis, **67**: 275–277 (1985)

DUBEAU, FRANCOIS: On band circulant matrices in the periodic spline interpolation theory, **72**: 177–182 (1985)

DUFF, I. S.: *See* Bjorck, A.

DUFF, IAIN: *See* Golub, Gene H.

DUKE, JOHN W.: A note on EP linear transformations, **3**: 379–382 (1970)

DUNKL, CHARLES F. AND RAMIREZ, DONALD E.: A linear programming problem in harmonic analysis, **14**: 107–116 (1976)

DYM, HARRY AND GOHBERG, ISRAEL: Extensions of band matrices with band inverses, **36**: 1–24 (1981)

EAVES, B. CURTIS: Piecewise linear retractions by reflexion, **7**: 93–98 (1973)

EAVES, B. CURTIS: Subdivisions from primal and dual cones and polytopes, **62**: 277–285 (1984)

EBERLEIN, P. J.: Remarks on the van der Waerden conjecture. II, **2**: 311–320 (1969)

ECKHARDT, ULRICH: Theorems on the dimension of convex sets, **12**: 63–76 (1975)

EGGERMONT, P. P. B., HERMAN, G. T., AND LENT, A.: Iterative algorithms for large partitioned linear systems, with applications to image reconstruction, **40**: 37–67 (1981)

EIFLER, L. Q.: *See* Barker, G. P.

EISENFELD, J.: Block diagonalization of partitioned matrix operators, **6**: 183–191 (1973)

EISENFELD, JEROME: Block diagonalization and eigenvalues, **15**: 205–215 (1976)

EISENSTAT, STANLEY C., LEWIS, JOHN W., AND SCHULTZ, MARTIN H.: Optimal block diagonal scaling of block 2-cyclic matrices, **44**: 181–186 (1982)

EL MOSSADEQ, A., KOBILINSKY, A., AND COLLOMBIER, D.: Construction d'orthogonaux dans les groupes abeliens finis et confusions d'effets dans les plans factoriels: Construction of orthogonals in finite abelian groups and confounding effects in factorial designs, **70**: 303–320 (1985)

ELDEN, LARS AND SCHREIBER, ROBERT: A systolic array for the regularization of ill-conditioned least-squares problems with triangular Toeplitz matrix: Special volume on parallel computing, **77**: 137–147 (1986)

ELEZOVIC, NEVEN: On the minimal polynomial of a resolvent, **86**: 1–9 (1987)

ELFVING, TOMMY: On some methods for entropy maximization and matrix scaling, **34**: 321–339 (1980)

ELFVING, TOMMY: *See* Censor, Yair

ELIA, MICHELE: A note on the computation of the bit error rate for binary block codes, **98**: 199–210 (1988)

ELLER, JOZSEF: On functions of companion matrices, **96**: 191–210 (1987)

ELLERS, ERICH W.: Products of two involutory matrices over skewfields, **26**: 59–63 (1979)

ELLERS, ERICH W. AND ISHIBASHI, HIROYUKI: Factorization of transformations over a local ring, **85**: 17–27 (1987)

ELLERS, ERICH W. AND NOLTE, WOLFGANG: Radical relations in orthogonal groups, **38**: 135–139 (1981)

ELLIS, R. L.: *See* Ben-Artzi, A.

ELLIS, ROBERT L., GOHBERG, ISRAEL, AND LAY, DAVID: Factorization of block matrices, **69**: 71–93 (1985)

ELSNER, L.: A note on characterizations of irreducibility of nonnegative matrices, **14**: 187–188 (1976)

ELSNER, L.: An optimal bound for the spectral variation of two matrices, **71**: 77–80 (1985)

ELSNER, L.: Block scaling with optimal Euclidean condition, **58**: 69–73 (1984)

ELSNER, L.: On convexity properties of the spectral radius of nonnegative matrices, **61**: 31–35 (1984)

ELSNER, L.: On matrices leaving invariant a nontrivial convex set, **42**: 103–107 (1982)

ELSNER, L.: On some algebraic problems in connection with general eigenvalue algorithms, **26**: 123–138 (1979)

ELSNER, L.: On the variation of the spectra of matrices, **47**: 127–138 (1982)

ELSNER, L. AND HADELER, K. P.: Lothar Collatz—on the occasion of his 75th birthday, **68**: vi, 1–8 (1985)

ELSNER, L. AND PAARDEKOOPER, M. H. C.: On measures of nonnormality of matrices, **92**: 107–123 (1987)

ELSNER, LUDWIG: Inverse iteration for calculating the spectral radius of a non-negative irreducible matrix, **15**: 235–242 (1976)

ELSNER, LUDWIG: Quasimonotonie und Ungleichungen in halbgeordneten Raumen, **8**: 249–261 (1974)

ELSNER, LUDWIG: *See* Johnson, Charles R.

ELSNER, LUDWIG AND SUN, JI GUANG: Perturbation theorems for the generalized eigenvalue problem, **48**: 341–357 (1982)

ELWIN, JOHN: *See* Donald, John

EMBRY-WARDROP, MARY: *See* Das, K. C.

EMRE, EROL: Generalized model matching and (F, G)-invariant submodules for linear systems over rings, **50**: 133–166 (1983)

ENGEL, GERNOT M.: Regular equimodular sets of matrices for generalized matrix functions, **7**: 243–274 (1973)

ENGEL, GERNOT M. AND SCHNEIDER, HANS: Cyclic and diagonal products on a matrix, **7**: 301–335 (1973)

ENGEL, GERNOT M. AND SCHNEIDER, HANS: Matrices diagonally similar to a symmetric matrix, **29**: 131–138 (1980)

ERDELSKY, P. J.: A general theorem on dominant-diagonal matrices, **1**: 203–209 (1968)

ERICSSON, THOMAS AND RUHE, AXEL: Lanczos algorithms and field of value rotations for symmetric matrix pencils, **88**: 733–746 (1987)

ERMERS, RUUD AND POLMAN, BEN: On the eigenvalues of the structure matrix of matrices of zeros and ones, **95**: 17–41 (1987)

ESTES, DENNIS: *See* Butts, Hubert S.

ESTES, DENNIS R.: Determinants of Galois automorphisms of maximal commutative rings of 2×2 matrices, **27**: 225–243 (1979)

ESTES, DENNIS R. AND TAUSSKY, OLGA: Remarks concerning sums of three squares and quaternion commutator identities, **35**: 279–285 (1981)

EVARD, JEAN-CLAUDE: Conditions for a vector subspace $E(t)$ and for a projector $P(t)$ not to depend on t, **91**: 121–131 (1987)

EVARD, JEAN-CLAUDE: On matrix functions which commute with their derivative, **68**: 145–178 (1985)

FABRYKOWSKI, J., SHARMA, A., AND ZASSENHAUS, H.: Some Birkhoff interpolation problems on the roots of unity, **65**: 1–23 (1985)

FAN, KY: An identity for symmetric bilinear forms, **65**: 273–279 (1985)

FAN, KY: An inequality for subadditive functions on a distributive lattice, with application to determinantal inequalities, **1**: 33–38 (1968)

FAN, KY: Generalized Cayley transforms and strictly dissipative matrices, **5**: 155–172 (1972)

FAN, KY: Normalizable operators, **52**: 253–263 (1983)

FAN, KY: On strictly dissipative matrices, **9**: 223–241 (1974)

FAN, KY: Two applications of a consistency theorem for systems of linear inequalities, **11**: 171–180 (1975)

FAREBROTHER, R. W.: Linear unbiased approximators of the disturbances in the standard linear model, **67**: 259–274 (1985)

FAREBROTHER, R. W.: Necessary and sufficient conditions for a quadratic form to be positive whenever a set of homogeneous linear constraints is satisfied, **16**: 39–42 (1977)

FAREBROTHER, R. W.: Three theorems with applications to Euclidean distance matrices, **95**: 11–16 (1987)

FARIA, ISABEL: Permanental roots and the star degree of a graph, **64**: 255–265 (1985)

FARJOT, PAULETTE: Rang des matrices hermitiennes semi-definies positives indefiniment divisibles, **15**: 189–196 (1976)

FARMER, K. BOLLING: Hermitian geometries in projective space, **35**: 37–50 (1981)

FARMER, K. BOLLING AND HALE, MARK P., JR.: Dual affine geometries and alternative bilinear forms, **30**: 183–199 (1980)

FARNSTEINER, ROLF: Quaternionic Lie algebras, **61**: 225–231 (1984)

FAUDREE, R. J., ROUSSEAU, C. C., AND SHEEHAN, J.: Strongly regular graphs and finite Ramsey theory, **46**: 221–241 (1982)

FEIG, E.: *See* Auslander, L.

FEIG, EPHRAIM AND WINOGRAD, SHMUEL: On the direct sum conjecture, **63**: 193–219 (1984)

FEINSILVER, PHILIP: Circulants, inversion of circulants, and some related matrix algebras, **56**: 29–43 (1984)

FEINSILVER, PHILIP J.: *See* Barrett, Wayne W.

FEINTUCH, AVRAHAM: One-dimensional perturbations of cyclic operators, **18**: 171–174 (1977)

FELZENBAUM, A. AND TAMIR, A.: Cyclic permutations and nearly symmetric integer vectors, **27**: 159–166 (1979)

FELZENBAUM, ALEXANDER: *See* Berger, Marc A.

FENNER, T. I. AND LOIZOU, G.: Matrix bounds on the spectral condition number, **8**: 157–178 (1974)

FERLAND, JACQUES A.: Matrix criteria for pseudoconvex functions in the class C^2, **21**: 47–57 (1978)

FERLAND, JACQUES A.: Matrix-theoretic criteria for the quasiconvexity of twice continuously differentiable functions, **38**: 51–63 (1981)

FERLAND, JACQUES A.: Positive subdefinite matrices, **31**: 233–244 (1980)

FERLAND, JACQUES A.: *See* Cottle, Richard W.

FEROE, JOHN A.: A spectral radius theorem for matrix seminorms, **22**: 97–103 (1978)

FERREIRA, SILVIA M. M.: *See* Micali, Artibano

FIALA, TIBOR: Normal equivalent to an arbitrary diagonalizable matrix, **51**: 153–162 (1983)

FIEDLER, M., JOHNSON, CHARLES R., AND MARKHAM, T. L.: Notes on inverse *M*-matrices, **91**: 75–81 (1987)

FIEDLER, MIROSLAV: *S*-matrices, **57**: 157–167 (1984)

FIEDLER, MIROSLAV: A characterization of tridiagonal matrices, **2**: 191–197 (1969)

FIEDLER, MIROSLAV: A note on the Hadamard product of matrices, **49**: 233–235 (1983)

FIEDLER, MIROSLAV: Bounds for eigenvalues of doubly stochastic matrices, **5**: 299–310 (1972)

FIEDLER, MIROSLAV: Eigenvalues of nonnegative symmetric matrices, **9**: 119–142 (1974)

FIEDLER, MIROSLAV: Geometry of the numerical range of matrices, **37**: 81–96 (1981)

FIEDLER, MIROSLAV: Hankel and Loewner matrices, **58**: 75–95 (1984)

FIEDLER, MIROSLAV: Polynomials and Hankel matrices, **66**: 235–248 (1985)

FIEDLER, MIROSLAV: Quasidirect decompositions of Hankel and Toeplitz matrices, **61**: 155–174 (1984)

FIEDLER, MIROSLAV: Remarks on the Schur complement, **39**: 189–195 (1981)

FIEDLER, MIROSLAV: *See* Burns, Fennell

FIEDLER, MIROSLAV: *See* Haynsworth, Emilie

FIEDLER, MIROSLAV AND GRONE, ROBERT: Characterizations of sign patterns of inverse-positive matrices, **40**: 237–245 (1981)

FIEDLER, MIROSLAV, JOHNSON, CHARLES R., MARKHAM, THOMAS L., AND NEUMANN, MICHAEL: A trace inequality for *M*-matrices and the symmetrizability of a real matrix by a positive diagonal matrix, **71**: 81–94 (1985)

FIEDLER, MIROSLAV, MARKHAM, THOMAS L., AND NEUMANN, MICHAEL: Classes of products of *M*-matrices and inverse *M*-matrices, **52**: 265–287 (1983)

FIEDLER, MIROSLAV AND MARKHAM, THOMAS L.: Completing a matrix when certain entries of its inverse are specified, **74**: 225–237 (1986)

FIEDLER, MIROSLAV AND MARKHAM, THOMAS L.: Rank-preserving diagonal completions of a matrix, **85**: 49–56 (1987)

FIEDLER, MIROSLAV AND MERRIS, RUSSELL: Irreducibility of associated matrices, **37**: 1–10 (1981)

FIEDLER, MIROSLAV AND PTAK, VLASTIMIL: Bezoutians and intertwining matrices, **86**: 43–51 (1987)

FIEDLER, MIROSLAV AND PTAK, VLASTIMIL: Intertwining and testing matrices corresponding to a polynomial, **86**: 53–74 (1987)

FILIPPENKO, IVAN: *See* Marcus, Marvin

FILLMORE, P. A.: *See* Deddens, J. A.

FILLMORE, P. A., HERRERO, DOMINGO A., AND LONGSTAFF, W. E.: The hyperinvariant subspace lattice of a linear transformation, **17**: 125–132 (1977)

FISCHER, P.: Substochastic matrices and von Neumann majorization, **93**: 247–254 (1987)

FISCHER, P. AND SWART, E. R.: Three-dimensional line stochastic matrices and extreme points, **69**: 179–203 (1985)

FISCHER, PAL: *See* Christensen, Jens Peter Reus

FITZ-GERALD, D. G.: Computing the maximum generalized inverse of a Boolean matrix, **16**: 203–207 (1977)

FIXMAN, URI AND OKOH, FRANK: Extensions of pairs of linear transformations between infinite-dimensional vector spaces, **19**: 275–291 (1978)

FLANDERS, HARLEY: A new proof of R. Foster's averaging formula in networks, **8**: 35–37 (1974)

FLANDERS, HARLEY AND WIMMER, HARALD K.:

Positive operators and a problem in control theory, **8**: 39–42 (1974)

FLETCHER, R.: Factorizing symmetric indefinite matrices, **14**: 257–272 (1976)

FLETCHER, R. AND GRIFFITHS, D. F.: The generalized eigenvalue problem for certain unsymmetric band matrices, **29**: 139–149 (1980)

FLORES DE CHELA, DELIA: Generalized inverses on normed vector spaces, **26**: 243–263 (1979)

FLORES DE CHELA, DELIA: Approximations in the l_∞ norm and the generalized inverse, **42**: 3–21 (1982)

FLORES DE CHELA, DELIA: Generalized inverses under the l_1-norm, **94**: 237–261 (1987)

FONG, C. K.: Norm estimates related to self-commutators, **74**: 151–156 (1986)

FONSECA, AMELIA: *See* Dias da Silva, J. A.

FORAN, JAMES: *See* Barker, George Philip

FOREGGER, THOMAS H.: Minimum permanents of multiplexes, **87**: 197–211 (1987)

FOREGGER, THOMAS H.: On the minimum value of the permanent of a nearly decomposable doubly stochastic matrix, **32**: 75–85 (1980)

FOSTER, LESLIE V.: Rank and null space calculations using matrix decomposition without column interchanges, **74**: 47–71 (1986)

FOX, DAVID W.: The convexity of the range of three Hermitian forms and of the numerical range of sesquilinear forms, **22**: 191–194 (1978)

FOX, L. AND HAYES, LINDA: Polynomial factorization and the *Q-D* algorithm, **1**: 445–463 (1968)

FREEDE, LINDA J.: *See* Thompson, Robert C.

FREEDMAN, H. I. AND LAWSON, J. D.: Systems with constant eigenvectors with applications to exact and numerical solutions of ordinary differential equations, **8**: 369–374 (1974)

FREEMAN, J. W.: *See* Bruen, A. A.

FREESE, RALPH: Inequalities for generalized matrix functions based on arbitrary characters, **7**: 337–345 (1973)

FREUND, R.: A note on two block-SOR methods for sparse least squares problems, **88**: 211–221 (1987)

FREY, A. E., HALL, C. A., AND PORSCHING, T. A.: Numerical integration and the constant strain condition, **29**: 151–159 (1980)

FRIEDLAND, S. AND MELKMAN, A. A.: On the eigenvalues of nonnegative Jacobi matrices, **25**: 239–253 (1979)

FRIEDLAND, S. AND ROBBIN, J. W.: Symmetries of tensor products, **44**: 97–123 (1982)

FRIEDLAND, S. AND ZENGER, C.: All spectral dominant norms are stable, **58**: 97–107 (1984)

FRIEDLAND, SHMUEL: A characterization of transform absolute norms, **28**: 63–68 (1979)

FRIEDLAND, SHMUEL: A generalization of the Motzkin-Taussky theorem, **36**: 103–109 (1981)

FRIEDLAND, SHMUEL: Inverse eigenvalue problems, **17**: 15–51 (1977)

FRIEDLAND, SHMUEL: Limit eigenvalues of nonnegative matrices, **74**: 173–178 (1986)

FRIEDLAND, SHMUEL: Matrices satisfying the van der Waerden conjecture, **8**: 521–528 (1974)

FRIEDLAND, SHMUEL: On inverse multiplicative eigenvalue problems for matrices, **12**: 127–137 (1975)

FRIEDLAND, SHMUEL: The maximal eigenvalue of 0-1 matrices with prescribed number of ones, **69**: 33–69 (1985)

FRIEDLAND, SHMUEL: Weak interlacing properties of totally positive matrices, **71**: 95–100 (1985)

FRIEDLAND, SHMUEL: *See* Bhatia, Rajendra

FRIEDLAND, SHMUEL: *See* Cohen, Joel E.

FRIEDLAND, SHMUEL AND KATZ, MOSHE: On a matrix inequality, **85**: 185–190 (1987)

FRIEDLAND, SHMUEL AND MICCHELLI, CHARLES A.: Bounds on the solutions of difference equations and spline interpolation at knots, **20**: 219–251 (1978)

FRIEDLAND, SHMUEL AND SIMON, BARRY: The codimension of degenerate pencils, **44**: 41–53 (1982)

FRIEDLAND, SHMUEL AND TADMOR, EITAN: Optimality of the Lax-Wendroff condition, **56**: 121–129 (1984)

FRIEDLANDER, B., MORF, M., KAILATH, T., AND LJUNG, L.: New inversion formulas for matrices classified in terms of their distance from Toeplitz matrices, **27**: 31–60 (1979)

FRIEDMAN, NATHAN AND BOYARSKY, ABRAHAM:

Irreducibility and primitivity using Markov maps, **37**: 103–117 (1981)

FRIEDMAN, NATHAN AND BOYARSKY, ABRAHAM: Matrices and eigenfunctions induced by Markov maps, **38**: 141–147 (1981)

FRYDMAN, HALINA: A structure of doubly stochastic Markov chains, **67**: 51–66 (1985)

FU, LORRAINE: An inverse theorem for Jacobi matrices, **12**: 55–61 (1975)

FUHRMANN, P. A.: *See* Shamir, T.

FUHRMANN, PAUL A.: On Hamiltonian rational transfer functions, **63**: 1–93 (1984)

FUHRMANN, PAUL A.: On symmetric rational transfer functions, **50**: 167–250 (1983)

FUHRMANN, PAUL A.: Remarks on the inversion of Hankel matrices, **81**: 89–104 (1986)

FUJIMOTO, TAKAO, HERRERO, CARMEN, AND VILLAR, ANTONIO: A sensitivity analysis for linear systems involving *M*-matrices and its application to the Leontief model, **64**: 85–91 (1985)

FUJIMOTO, TAKAO AND KRAUSE, ULRICH: Strong ergodicity for strictly increasing nonlinear operators, **71**: 101–112 (1985)

FUJISHIGE, SATORU: A system of linear inequalities with a submodular function on $\{0, \pm 1\}$ vectors, **63**: 253–266 (1984)

FUJIWARA, O.: *See* Han, S.-P.

FULTON, JOHN D.: Characterization and enumeration of linear classes of involutions over a finite field, **6**: 119–127 (1973)

FULTON, JOHN D.: Generalized inverses of matrices over fields of characteristic two, **28**: 69–76 (1979)

FULTON, JOHN D.: Linear classes of involutions over fields of characteristic two, **6**: 129–142 (1973)

FUNDERLIC, R. E.: Some characterizations of orthant monotonic norms, **28**: 77–83 (1979)

FUNDERLIC, R. E.: *See* Cline, R. E.

FUNDERLIC, R. E. AND GEIST, GEORGE A.: Torus data flow for parallel computation of missized matrix problems: Special volume on parallel computing, **77**: 149–163 (1986)

FUNDERLIC, R. E. AND MEYER, C. D., JR.: Sensitivity of the stationary distribution vector for an ergodic Markov chain, **76**: 1–17 (1986)

FUNDERLIC, R. E. AND PLEMMONS, R. J.: LU decomposition of *M*-matrices by elimination without pivoting, **41**: 99–110 (1981)

GABRIEL, J. R.: *See* Dongarra, J. J.

GABRIEL, RICHARD: The normal ΔH-matrices with connection to some Jacobi-like methods, **91**: 181–194 (1987)

GABRIEL, RICHARD AND HARTWIG, ROBERT E.: The Drazin inverse as a gradient, **63**: 237–252 (1984)

GAIHA, PRABHA: *See* Berman, Abraham

GAINES, F. J. AND LAFFEY, T. J.: Report on the Dublin Matrix Theory Conference, March 1984, **68**: 243–274 (1985)

GAINES, FERGUS: Kato-Taussky-Wielandt commutator relations, **1**: 127–138 (1968)

GAINES, FERGUS J., LAFFEY, THOMAS J., AND SHAPIRO, HELENE M.: Pairs of matrices with quadratic minimal polynomials, **52**: 289–292 (1983)

GAINES, FERGUS J. AND LAFFEY, THOMAS J.: The mathematical work of Walter Ledermann, **69**: iii, 1–8 (1985)

GALKOWSKI, KRZYSZTOF: Three-way companion matrices of three-variable polynomials, **37**: 55–75 (1981)

GALLAI, TIBOR: The life and scientific work of Denes Konig (1884–1944), **21**: 189–205 (1978)

GALPERIN, A. M. AND WAKSMAN, Z.: On pseudo-inverses of operator products, **33**: 123–131 (1980)

GAMBLE, R. O.: *See* Brawley, J. V.

GARCIA, C. B. AND ZANGWILL, W. I.: On univalence and *P*-matrices, **24**: 239–250 (1979)

GARDINER, A.: Antipodal graphs of diameter three, **46**: 215–219 (1982)

GARLOFF, J.: *See* Bialas, S.

GARLOFF, JURGEN: Criteria for sign regularity of sets of matrices, **44**: 153–160 (1982)

GARLOFF, JURGEN: Majorization between the diagonal elements and the eigenvalues of an oscillating matrix, **47**: 181–184 (1982)

GAROLA, C. AND SOLOMBRINO, L.: Commutation in vector spaces over division rings with a conjugation, **36**: 41–56 (1981)

GASCA, M.: *See* Muhlbach, G.

GASTINEL, N. AND JOLY, J. L.: Condition numbers and general projection method, **3**: 185–224 (1970)

GASTINEL, NOEL: Noel Gastinel and computational mathematics, **78**: 237–247 (1986)

GAUTSCHI, WALTER: The condition of

Vandermonde-like matrices involving orthogonal polynomials, **52**: 293–300 (1983)

GAUTSCHI, WALTER: To Alexander M. Ostrowski on his ninetieth birthday, **52**: xi–xiv (1983)

GEIST, GEORGE A.: *See* Funderlic, R. E.

GEKELER, ECKART: On the pointwise matrix product and the mean value theorem, **35**: 183–191 (1981)

GELDENHUYS, G. AND SIPPEL, C.: Bounds for the real eigenvalues of a cascade matrix, **93**: 127–130 (1987)

GENDREAU, MICHEL: On the location of eigenvalues of off-diagonal constant matrices, **79**: 99–102 (1986)

GENIN, Y.: *See* Delsarte, P.

GENIN, YVES, VAN DOOREN, PAUL, KAILATH, TOM, DELOSME, JEAN-MARC, AND MORF, MARTIN: On Σ-lossless transfer functions and related questions, **50**: 251–275 (1983)

GENTLEMAN, W. M.: Error analysis of *QR* decompositions by Givens transformations, **10**: 189–197 (1975)

GENTRY, IVEY C.: *See* Brauer, Alfred

GEORGE, ALAN, HEATH, MICHAEL T., AND LIU, JOSEPH: Parallel Cholesky factorization on a shared-memory multiprocessor: Special volume on parallel computing, **77**: 165–187 (1986)

GEORGE, ALAN AND HEATH, MICHAEL T.: Solution of sparse linear least squares problems using Givens rotations, **34**: 69–83 (1980)

GEORGE, ALAN, LIU, JOSEPH, AND NG, ESMOND: Row-ordering schemes for sparse Givens transformations. I. Bipartite graph model, **61**: 55–81 (1984)

GEORGE, ALAN, LIU, JOSEPH, AND NG, ESMOND: Row-ordering schemes for sparse Givens transformations. II. Implicit graph model, **75**: 203–223 (1986)

GEORGE, ALAN, LIU, JOSEPH, AND NG, ESMOND: Row-ordering schemes for sparse Givens transformations. III. Analyses for a model problem, **75**: 225–240 (1986)

GEORGE, ALAN AND LIU, JOSEPH W. H.: Householder reflections versus Givens rotations in sparse orthogonal decomposition, **88**: 223–238 (1987)

GEORGE, ALAN AND RASHWAN, HAMZA: On symbolic factorization of partitioned sparse symmetric matrices, **34**: 145–157 (1980)

GEORGIOU, TRYPHON T.: *See* Khargonekar, Pramod P.

GERSTEIN, LARRY J.: A local approach to matrix equivalence, **16**: 221–232 (1977)

GERTH, FRANK, III: Finite Fourier transform for functions with restricted support, **60**: 145–158 (1984)

GETSON, ALBERT: *See* Hsuan, Francis

GHATAGE, PRATIBHA G.: On the spectrum of the Bergman-Hilbert matrix, **97**: 57–63 (1987)

GIBSON, J. A.: *See* Ha, T. T.

GIBSON, P. M.: Simultaneous diagonalization of rectangular complex matrices, **9**: 45–53 (1974)

GIBSON, P. M.: *See* Beasley, E. T., Jr.

GIBSON, P. M.: *See* Deutsch, Emeric

GIBSON, PETER M.: Generalized doubly stochastic and permutation matrices over a ring, **30**: 101–107 (1980)

GIBSON, PETER M.: Permanental polytopes of doubly stochastic matrices, **32**: 87–111 (1980)

GIBSON, PETER M.: Products of basic doubly stochastic matrices over a field, **15**: 99–118 (1976)

GIBSON, PETER M.: Real permanental roots of doubly stochastic matrices, **21**: 289–291 (1978)

GIBSON, PETER M.: *See* Brualdi, Richard A.

GIBSON, PETER M.: *See* Dow, Stephen J.

GILBERT, J. D.: *See* Wibker, E. A.

GILBERT, JIMMIE D.: *See* Barwick, David T.

GILES, F. R. AND PULLEYBLANK, W. R.: Total dual integrality and integer polyhedra, **25**: 191–196 (1979)

GILL, PHILIP E. AND MURRAY, WALTER: A numerically stable form of the simplex algorithm, **7**: 99–138 (1973)

GILL, PHILIP E., MURRAY, WALTER, SAUNDERS, MICHAEL A., AND WRIGHT, MARGARET H.: Maintaining *LU* factors of a general sparse matrix, **88**: 239–270 (1987)

GILMAN, JANE: A matrix representation for automorphisms of compact Riemann surfaces, **17**: 139–147 (1977)

GIOVAGNOLI, A. AND WYNN, H. P.: *G*-majorization with applications to matrix orderings, **67**: 111–135 (1985)

GIVENS, CLARK R.: On the modified Leverrier–Faddeev algorithm, **44**: 161–167 (1982)

GIVENS, CLARK R.: Some observations on eigenvectors of Hadamard matrices of order 2^n, **56**: 245–250 (1984)

GLESER, LEON J. AND MOORE, DAVID S.: Positive dependence in Markov chains, **70**: 131–146 (1985)

GLOVER, N.: *See* Hsu, I. S.

GODSIL, C. D.: Eigenvalues of graphs and digraphs, **46**: 43–50 (1982)

GODSIL, C. D. AND MCKAY, B. D.: Feasibility conditions for the existence of walk-regular graphs, **30**: 51–61 (1980)

GOEL, V. K.: *See* Jain, S. K.

GOFF, STUART: Hermitian function matrices which commute with their derivative, **36**: 33–40 (1981)

GOFFIN, JEAN-LOUIS AND HOFFMAN, ALAN J.: On the relationship between the Hausdorff distance and matrix distances of ellipsoids, **52**: 301–313 (1983)

GOHBERG, I.: *See* Ben-Artzi, A.

GOHBERG, I., KAILATH, T., AND KOLTRACHT, I.: Efficient solution of linear systems of equations with recursive structure, **80**: 81–113 (1986)

GOHBERG, I., KAILATH, T., KOLTRACHT, I., AND LANCASTER, P.: Linear complexity parallel algorithms for linear systems of equations with recursive structure, **88**: 271–315 (1987)

GOHBERG, I., LANCASTER, P., AND RODMAN, L.: Spectral analysis of matrix polynomials. I. Canonical forms and divisors, **20**: 1–44 (1978)

GOHBERG, I., LANCASTER, P., AND RODMAN, L.: Spectral analysis of matrix polynomials. II. The resolvent form and spectral divisors, **21**: 65–88 (1978)

GOHBERG, I., LERER, L., AND RODMAN, L.: Wiener-Hopf factorization of piecewise matrix polynomials, **52**: 315–350 (1983)

GOHBERG, I. AND RODMAN, L.: On the distance between lattices of invariant subspaces of matrices, **76**: 85–120 (1986)

GOHBERG, I. AND RODMAN, L.: On the spectral structure of monic matrix polynomials and the extension problem, **24**: 157–172 (1979)

GOHBERG, ISRAEL: *See* Ball, Joseph A.

GOHBERG, ISRAEL: *See* Dym, Harry

GOHBERG, ISRAEL: *See* Ellis, Robert L.

GOHBERG, ISRAEL AND GOLDBERG, SEYMOUR: Finite-dimensional Wiener-Hopf equations and factorizations of matrices, **48**: 219–236 (1982)

GOLDBERG, M. AND ZWAS, G.: On matrices having equal spectral radius and spectral norm, **8**: 427–434 (1974)

GOLDBERG, MOSHE: Ernst G. Straus (1922–1983), **64**: 1–19 (1985)

GOLDBERG, MOSHE: Mixed multiplicativity and l_p norms for matrices, **73**: 123–131 (1986)

GOLDBERG, MOSHE: Multiplicativity factors and mixed multiplicativity, **97**: 45–56 (1987)

GOLDBERG, MOSHE: Multiplicativity of l_p norms for matrices. II, **62**: 1–10 (1984)

GOLDBERG, MOSHE AND STRAUS, E. G.: Elementary inclusion relations for generalized numerical ranges, **18**: 1–24 (1977)

GOLDBERG, MOSHE AND STRAUS, E. G.: Multiplicativity factors for C-numerical radii, **54**: 1–16 (1983)

GOLDBERG, MOSHE AND STRAUS, E. G.: Multiplicativity of l_p norms for matrices, **52**: 351–360 (1983)

GOLDBERG, MOSHE AND STRAUS, E. G.: Norm properties of C-numerical radii, **24**: 113–131 (1979)

GOLDBERG, MOSHE AND STRAUS, E. G.: Operator norms, multiplicativity factors, and C-numerical radii, **43**: 137–159 (1982)

GOLDBERG, MOSHE AND STRAUS, ERNST G.: Inclusion relations involving k-numerical ranges, **15**: 261–270 (1976)

GOLDBERG, MOSHE, TADMOR, EITAN, AND ZWAS, GIDEON: Numerical radius of positive matrices, **12**: 209–214 (1975)

GOLDBERG, MOSHE AND TADMOR, EITAN: On the numerical radius and its applications, **42**: 263–284 (1982)

GOLDBERG, SEYMOUR: *See* Gohberg, Israel

GOLDBERG, WALLACE: *See* Hochstadt, Harry

GOLLER, HANS: Shorted operators and rank decomposition matrices, **81**: 207–236 (1986)

GOLUB, G. H.: *See* Kaustsky, J.

GOLUB, G. H.: *See* de Boor, C.

GOLUB, G. H., HOFFMAN, ALAN, AND STEWART, G. W.: A generalization of the Eckart-Young-Mirsky matrix approximation theorem, **88**: 317–327 (1987)

GOLUB, GENE H., DUFF, IAIN, AND MOLER, CLEVE: Dedication, **88**: 1–12 (1987)

GOLUB, GENE H. AND PLEMMONS, ROBERT J.: Large-scale geodetic least-squares adjustment by dissection and orthogonal decomposition, **34**: 3–28 (1980)

GOLUB, GENE H. AND VAN LOAN, CHARLES: Unsymmetric positive definite linear systems, **28**: 85–97 (1979)

GOMORY, RALPH E.: Some polyhedra related to combinatorial problems, **2**: 451–558 (1969)

GOODMAN, T. N. T. AND MICCHELLI, CHARLES A.: Corner cutting algorithms for the Bézier representation of free form curves, **99**: 225–252 (1988)

GORDON, WILLIAM ROBERT: *See* Marcus, Marvin

GORELICK, MICHAEL R. AND KRANZER, HERBERT C.: An extension of the Kreiss stability theorem to families of matrices of unbounded order, **14**: 237–255 (1976)

GOTTLIEB, D.: *See* Abarbanel, S.

GOTTLIEB, DAVID AND GUNZBURGER, MAX D.: On the matrix equations $AH + HA^* = A^*H + HA = I$, **17**: 277–282 (1977)

GOULD, N. I. M.: *See* Caron, R. J.

GOVER, M. J. C. AND BARNETT, S.: Displacement rank and quasitriangular decomposition for r-Toeplitz matrices, **88**: 329–348 (1987)

GOVER, M. J. C. AND BARNETT, S.: Generating polynomials for matrices with Toeplitz or conjugate-Toeplitz inverses, **61**: 253–275 (1984)

GOW, R.: The number of equivalence classes of nondegenerate bilinear and sesquilinear forms over a finite field, **41**: 175–181 (1981)

GOW, R. AND LAFFEY, T. J.: Pairs of alternating forms and products of two skew-symmetric matrices, **63**: 119–132 (1984)

GOWDA, M. SEETHARAMA: Cone characterizations of positive semidefinite operators on a Hilbert space, **64**: 77–83 (1985)

GOWER, J. C.: A modified Leverrier-Faddeev algorithm for matrices with multiple eigenvalues, **31**: 61–70 (1980)

GOWER, J. C.: Properties of Euclidean and non-Euclidean distance matrices, **67**: 81–97 (1985)

GRAD, J.: *See* Brebner, M. A.

GRAGG, W. B. AND REICHEL, L.: On the application of orthogonal polynomials to the iterative solution of linear systems of equations with indefinite or non-Hermitian matrices, **88**: 349–371 (1987)

GRAGG, WILLIAM B. AND LINDQUIST, ANDERS: On the partial realization problem, **50**: 277–319 (1983)

GRAHAM, R. L. AND SLOANE, N. J. A.: Anti-Hadamard matrices, **62**: 113–137 (1984)

GRANOT, DANIEL: *See* Charnes, A.

GRANOT, FRIEDA: *See* Charnes, A.

GRAVER, JACK E.: Boolean designs and self-dual matroids, **10**: 111–128 (1975)

GRAY, L. J. AND WILSON, D. G.: Construction of a Jacobi matrix from spectral data, **14**: 131–134 (1976)

GRAY, L. J. AND WILSON, D. G.: Nonnegative factorization of positive semidefinite nonnegative matrices, **31**: 119–127 (1980)

GREEN, B. M.: On weakly sign-symmetric matrices, **8**: 355–360 (1974)

GREEN, MICHAEL: Balanced stochastic realizations, **98**: 211–247 (1988)

GREENFIELD, GARY R. AND DRUCKER, DANIEL: On the discriminant of a trinomial, **62**: 105–112 (1984)

GREGORAC, R. J. AND HENTZEL, IRVIN ROY: A note on the analogue of Oppenheim's inequality for permanents, **94**: 109–112 (1987)

GREGORY, D. A.: *See* de Caen, D.

GREGORY, DAVID A.: *See* Beasley, LeRoy B.

GREVILLE, T. N. E.: The Souriau-Frame algorithm and the Drazin pseudoinverse, **6**: 205–208 (1973)

GREVILLE, T. N. E.: Toeplitz matrices with Toeplitz inverses revisited, **55**: 87–92 (1983)

GREVILLE, T. N. E.: *See* Cline, Randall E.

GREVILLE, T. N. E. AND TRENCH, W. F.: Band matrices with Toeplitz inverses, **27**: 199–209 (1979)

GRIFFITHS, D. F.: *See* Fletcher, R.

GRINBERG, V. S.: *See* Barany, I.

GROH, ULRICH: Some observations on the spectra of positive operators on finite-dimensional C^*-algebras, **42**: 213–222 (1982)

GRONE, ROBERT: A note on the dimension of an orbital subspace, **17**: 283–286 (1977)

GRONE, ROBERT: Certain isometries of rectangular complex matrices, **29**: 161–171 (1980)

GRONE, ROBERT: *See* Fiedler, Miroslav

GRONE, ROBERT, JOHNSON, CHARLES R., SA, EDUARDO M., AND WOLKOWICZ, HENRY: Normal matrices, **87**: 213–225 (1987)

GRONE, ROBERT, JOHNSON, CHARLES R., SA, EDUARDO M., AND WOLKOWICZ, HENRY: Positive definite completions of partial Hermitian matrices, **58**: 109–124 (1984)

GRONE, ROBERT, JOHNSON, CHARLES R., SA, EDUARDO M., AND WOLKOWICZ, HENRY: Positive definite completions of partial Hermitian matrices, **58**: 109–124 (1984)

GRONE, ROBERT AND MERRIS, RUSSELL: A Fischer inequality for the second immanant, **87**: 77–83 (1987)

GRONE, ROBERT D., HOFFMAN, D. G., AND WALL, J. R.: Permutation-matrix groups with positive sum, **45**: 29–34 (1982)

GROSSE, ERIC: Tensor spline approximation, **34**: 29–41 (1980)

GRUNBAUM, F. ALBERTO: A remark on Hilbert's matrix, **43**: 119–124 (1982)

GRUNBAUM, F. ALBERTO: Toeplitz matrices commuting with tridiagonal matrices, **40**: 25–36 (1981)

GUICHAL, EDGARDO N.: A relation between Gram and Wronsky determinants, **72**: 59–72 (1985)

GUNN, E. A. AND ANDERS, G. J.: A comparison of interval linear programming with the simplex method, **38**: 149–159 (1981)

GUNZBURGER, M. D. AND NICOLAIDES, R. A.: Elimination with noninvertible pivots, **64**: 183–189 (1985)

GUNZBURGER, MAX D.: *See* Gottlieb, David

GUNZBURGER, MAX D. AND NICOLAIDES, R. A.: Stability of Gaussian elimination without pivoting on tridiagonal Toeplitz matrices, **45**: 21–28 (1982)

GURALNICK, ROBERT AND LANSKI, CHARLES: Pseudosimilarity and cancellation of modules, **47**: 111–115 (1982)

GURALNICK, ROBERT M.: A note on the local-global principle for similarity of matrices, **30**: 241–245 (1980)

GURALNICK, ROBERT M.: Invariants of finite linear groups on relatively free algebras, **72**: 85–92 (1985)

GURALNICK, ROBERT M.: Matrix equivalence and isomorphism of modules, **43**: 125–136 (1982)

GURALNICK, ROBERT M.: Roth's theorems and decomposition of modules, **39**: 155–165 (1981)

GURALNICK, ROBERT M.: Roth's theorems for sets of matrices, **71**: 113–117 (1985)

GURALNICK, ROBERT M.: Similarity of holomorphic matrices, **99**: 85–96 (1988)

GURALNICK, ROBERT M.: Similarity of matrices over local rings, **41**: 161–174 (1981)

GUSTAFSON, W. H., HALMOS, P. R., AND RADJAVI, H.: Products of involutions: Collection of articles dedicated to Olga Taussky Todd, **13**: 157–162 (1976)

GUSTAFSON, WILLIAM H.: A note on matrix inversion, **57**: 71–73 (1984)

GUSTAFSON, WILLIAM H.: Roth's theorems over commutative rings, **23**: 245–251 (1979)

GUSTAFSON, WILLIAM H.: *See* Habibi, Javad Faghih

GUSTAFSON, WILLIAM H. AND ZELMANOWITZ, JULIUS M.: On matrix equivalence and matrix equations, **27**: 219–224 (1979)

GUTMAN, SHAUL: *See* Taub, Hedi

HA, T. T. AND GIBSON, J. A.: A note on the determinant of a functional confluent Vandermonde matrix and controllability, **30**: 69–75 (1980)

HAACK, JOEL K.: When do the transpose and dual agree?, **56**: 63–72 (1984)

HABETLER, G. J.: *See* Cottle, R. W.

HABIBI, JAVAD FAGHIH AND GUSTAFSON, WILLIAM H.: Reflexive serial algebras, **99**: 217–223 (1988)

HACKBUSCH, WOLFGANG: Multigrid convergence for a singular perturbation problem, **58**: 125–145 (1984)

HADELER, K. P.: Ein inverses Eigenwertproblem, **1**: 83–102 (1968)

HADELER, K. P.: Multiplikative inverse Eigenwertprobleme, **2**: 65–86 (1969)

HADELER, K. P.: On copositive matrices, **49**: 79–89 (1983)

HADELER, K. P.: Submultiplikative Normen auf Algebren, **2**: 173–189 (1969)

HADELER, K. P.: *See* Deutsch, E.

HADELER, K. P.: *See* Elsner, L.

HADELER, K. P. AND MEINARDUS, G.: On the roots of Cauchy polynomials, **38**: 81–102 (1981)

HADJIDIMOS, A.: The optimal solution to the problem of complex extrapolation of a first-order scheme, **62**: 241–261 (1984)

HADJIDIMOS, A.: *See* Avdelas, G.

HADJIDIMOS, A., PSIMARNI, A., AND YEYIOS, A.: On the convergence of some generalized iterative methods, **75**: 117–132 (1986)

HADJIDIMOS, A. AND YEYIOS, A.: The principle of extrapolation in connection with the accelerated overrelaxation method, **30**: 115–128 (1980)

HADJISAVVAS, NICOLAS: Metrics on the set of states of a W^*-algebra: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 281–287 (1986)

HAERTEL, RAYMOND D.: *See* Barker, George Phillip

HAGER, RICHARD: *See* Donald, John

HAGER, WILLIAM W. AND PEDERSON, ROGER N.: Perturbations in eigenvalues, **42**: 39–55 (1982)

HALD, OLE H.: Inverse eigenvalue problems for Jacobi matrices, **14**: 63–85 (1976)

HALD, OLE H.: Numerical solution of the Gel'fand-Levitan equation, **28**: 99–111 (1979)

HALD, OLE HANSEN: A converse to the Bauer-Fike theorem, **9**: 267–274 (1974)

HALE, MARK P., JR.: *See* Farmer, K. Bolling

HALEY, STEPHEN B.: Solution of band matrix equations by projection-recurrence, **32**: 33–48 (1980)

HALL, ALASTAIR: Conditions for a matrix Kronecker lemma, **76**: 271–280 (1986)

HALL, C. A.: *See* Frey, A. E.

HALL, FRANK J.: On the independence of blocks of generalized inverses of bordered matrices, **14**: 53–61 (1976)

HALL, FRANK J.: *See* Bevis, Jean H.

HALL, FRANK J. AND KATZ, IRVING J.: Nonnegative integral generalized inverses, **39**: 23–39 (1981)

HALL, JONATHAN I.: Linear representations of cotriangular spaces, **49**: 257–273 (1983)

HALLUM, C. R.: *See* McMath, John S.

HALMOS, P. R.: Eigenvectors and adjoints, **4**: 11–15 (1971)

HALMOS, P. R.: *See* Conway, J. B.

HALMOS, P. R.: *See* Gustafson, W. H.

HALPIN, PATRICK: Symmetric T-ideals, **79**: 53–59 (1986)

HAMMARLING, SVEN: *See* Bjorck, Ake

HAMMARLING, SVEN: *See* Dongarra, Jack J.

HAMMER, JACOB AND HEYMANN, MICHAEL: Factorization of linear systems: a generalized framework, **50**: 321–352 (1983)

HAN, S.-P.: Relative eigenvalues of Hermitian matrices, **81**: 75–88 (1986)

HAN, S.-P. AND FUJIWARA, O.: An inertia theorem for symmetric matrices and its application to nonlinear programming, **72**: 47–58 (1985)

HAN, S. P. AND MANGASARIAN, O. L.: Conjugate cone characterization of positive definite and semidefinite matrices, **56**: 89–103 (1984)

HANKINS, MAX: *See* Brawley, J. V.

HANNAH, JOHN AND LAFFEY, THOMAS J.: Nonnegative factorization of completely positive matrices, **55**: 1–9 (1983)

HANSEN, ELDON: On the solution of linear algebraic equations with interval coefficients, **2**: 153–165 (1969)

HANSEN, GARY W. AND ROBINSON, DONALD W.: On the existence of generalized inverses, **8**: 95–104 (1974)

HANSON, MORGAN A.: *See* Mond, Bertram

HANSON, MORGAN A.: *See* Mond, Bertram

HARI, V.: On the convergence of cyclic Jacobi-like processes, **81**: 105–127 (1986)

HARTFIEL, D. J.: A control theory for stochastic eigenvectors of stochastic matrices through variations of entries, **56**: 139–160 (1984)

HARTFIEL, D. J.: A general theory of measures for nonnegative matrices, **35**: 21–35 (1981)

HARTFIEL, D. J.: A result concerning strongly ergodic nonhomogeneous Markov chains, **9**: 169–174 (1974)

HARTFIEL, D. J.: Concerning the interior of the D-stable matrices, **30**: 201–207 (1980)

HARTFIEL, D. J.: Mathematical considerations of nonhomogeneous production processes, **16**: 95–107 (1977)

HARTFIEL, D. J.: Two theorems generalizing

the mean transition probability results in the theory of Markov chains, **11**: 181–187 (1975)

HARTFIEL, D. J. AND LOEWY, R.: On matrices having equal corresponding principal minors, **58**: 147–167 (1984)

HARTWIG, R. E.: Generalizations of the spectral theorem for matrices. II. Matrix polynomials over arbitrary fields, **61**: 37–53 (1984)

HARTWIG, R. E.: The reverse order law revisited, **76**: 241–246 (1986)

HARTWIG, ROBERT E.: 1-2 inverses and the invariance of BA^+C, **11**: 271–275 (1975)

HARTWIG, ROBERT E.: A note on light matrices, **97**: 153–169 (1987)

HARTWIG, ROBERT E.: Applications of the Wronskian and Gram matrices of $\{t^i e^{\lambda_k t}\}$ (*Report*), **43**: 229–241 (1982)

HARTWIG, ROBERT E.: Drazin inverses and canonical forms in $M_n(Z/h)$, **37**: 205–233 (1981)

HARTWIG, ROBERT E.: Resultants, companion matrices, and Jacobson chains, **94**: 1–34 (1987)

HARTWIG, ROBERT E.: Roth's removal rule revisited, **49**: 91–115 (1983)

HARTWIG, ROBERT E.: Spectral inverses and the row-space equations, **20**: 57–68 (1978)

HARTWIG, ROBERT E.: *See* Bevis, Jean H.

HARTWIG, ROBERT E.: *See* Gabriel, Richard

HARTWIG, ROBERT E. AND KATZ, IRVING J.: Products of EP elements in reflexive semigroups, **14**: 11–19 (1976)

HARTWIG, ROBERT E. AND PUTCHA, MOHAN S.: Semisimilarity for matrices over a division ring, **39**: 125–132 (1981)

HARTWIG, ROBERT E. AND STYAN, GEORGE P. H.: On some characterizations of the "star" partial ordering for matrices and rank subtractivity, **82**: 145–161 (1986)

HAUKE, JAN: *See* Baksalary, Jerzy K.

HAUTUS, M. L. J.: Strong detectability and observers, **50**: 353–368 (1983)

HAUTUS, M. L. J. AND SILVERMAN, L. M.: System structure and singular control, **50**: 369–402 (1983)

HAVIV, MOSHE, RITOV, YAKOV, AND ROTHBLUM, URIEL G.: Iterative methods for approximating the subdominant modulus of an eigenvalue of a nonnegative matrix, **87**: 61–75 (1987)

HAVIV, MOSHE AND ROTHBLUM, URIEL G.: Bounds on distances between eigenvalues, **63**: 101–118 (1984)

HAYES, LINDA: *See* Fox, L.

HAYNSWORTH, EMILIE: Emilie Haynsworth, 1916–1985, **75**: 269–276 (1986)

HAYNSWORTH, EMILIE: *See* Burns, Fennell

HAYNSWORTH, EMILIE, FIEDLER, MIROSLAV, AND PTAK, VLASTIMIL: Extreme operators on polyhedral cones: Collection of articles dedicated to Olga Taussky Todd, **13**: 163–172 (1976)

HAYNSWORTH, EMILIE AND HOFFMAN, A. J.: Two remarks on copositive matrices, **2**: 387–392 (1969)

HAYNSWORTH, EMILIE AND WALL, J. R.: Group inverses of certain nonnegative matrices, **25**: 271–288 (1979)

HAYNSWORTH, EMILIE AND WALL, J. R.: Group inverses of certain positive operators, **40**: 143–159 (1981)

HAYNSWORTH, EMILIE V.: Determination of the inertia of a partitioned Hermitian matrix, **1**: 73–82 (1968)

HAYNSWORTH, EMILIE V.: Reduction of a matrix using properties of the Schur complement, **3**: 23–29 (1970)

HAYNSWORTH, EMILIE V.: *See* Carlson, David

HAYNSWORTH, EMILIE V. AND OSTROWSKI, ALEXANDER M.: On the inertia of some classes of partitioned matrices, **1**: 299–316 (1968)

HEADING, J.: Generalized zilch and the Jordan canonical form, **6**: 19–36 (1973)

HEADING, JOHN: Construction of generalized anisotropic zilch, **11**: 277–289 (1975)

HEADING, JOHN: Invariant functions of the elements of the powers of a square matrix, **55**: 133–145 (1983)

HEADING, JOHN: Zilch and simultaneous partial differential equations, **2**: 413–425 (1969)

HEARON, JOHN Z.: Nonsingular solutions of $TA - BT = C$, **16**: 57–63 (1977)

HEARON, JOHN Z.: Roots of an irreducible continuant, **3**: 125–127 (1970)

HEATH, M. T. AND SORENSEN, D. C.: A pipelined Givens method for computing the QR

factorization of a sparse matrix: Special volume on parallel computing, **77**: 189–203 (1986)

HEATH, MICHAEL T.: *See* George, Alan

HEATH, MICHAEL T.: *See* Scott, David S.

HEDRICK, MARK B.: *See* Brualdi, Richard A.

HEDRICK, MARK BLONDEAU: p-minors of a doubly stochastic matrix at which the permanent achieves a minimum, **10**: 177–179 (1975)

HEINIG, GEORG AND JUNGNICKEL, UWE: Hankel matrices generated by the Markov parameters of rational functions, **76**: 121–135 (1986)

HEINIG, GEORG AND JUNGNICKEL, UWE: Lyapunov equations for companion matrices, **76**: 137–147 (1986)

HEINTZ, JOOS: *See* de Groote, Hans F.

HEINZ, TONY F.: Topological properties of orthostochastic matrices, **20**: 265–269 (1978)

HELLEGOUARCH, YVES: Proprietes geometrico-arithmetiques des algebres a involution: Geometric and arithmetical properties of algebras with involution, **97**: 29–43 (1987)

HELMKE, UWE AND SHAYMAN, MARK A.: The biflag manifold and the fixed points of a unipotent transformation on the flag manifold, **92**: 125–159 (1987)

HENRICI, PETER: A general theory of osculation algorithms for conformal mapping, **52**: 361–382 (1983)

HENRICI, PETER AND ZIMMERMANN, KATHARINA: An estimate for the norms of certain cyclic Jacobi operators, **1**: 489–501 (1968)

HENTZEL, IRVIN ROY: *See* Gregorac, R. J.

HERMAN, G. T.: *See* Eggermont, P. P. B.

HERNANDEZ, VICENTE G. AND INCERTIS, FERNANDO C.: A block bidiagonal form for block companion matrices, **75**: 241–256 (1986)

HERRERO, CARMEN: *See* Fujimoto, Takao

HERRERO, DOMINGO A.: *See* Fillmore, P. A.

HERSHEY, J.: *See* Yarlagadda, R.

HERSHKOWITZ, DANIEL: On the spectra of matrices having nonnegative sums of principal minors, **55**: 81–86 (1983)

HERSHKOWITZ, DANIEL: Stability of acyclic matrices, **73**: 157–169 (1986)

HERSHKOWITZ, DANIEL: *See* Berman, Abraham

HERSHKOWITZ, DANIEL AND BERMAN, ABRAHAM: Localization of the spectra of P- and P_0-matrices, **52**: 383–397 (1983)

HERSHKOWITZ, DANIEL AND BERMAN, ABRAHAM: Notes on ω- and τ-matrices, **58**: 169–183 (1984)

HERSHKOWITZ, DANIEL AND JOHNSON, CHARLES R.: Linear transformations that map the P-matrices into themselves, **74**: 23–38 (1986)

HERSHKOWITZ, DANIEL AND JOHNSON, CHARLES R.: Spectra of matrices with P-matrix powers, **80**: 159–171 (1986)

HERSHKOWITZ, DANIEL, MEHRMANN, VOLKER, AND SCHNEIDER, HANS: Eigenvalue interlacing for certain classes of matrices with real principal minors, **88**: 373–403 (1987)

HERSHKOWITZ, DANIEL AND MEHRMANN, VOLKER: Linear transformations which map the classes of ω-matrices and τ-matrices into or onto themselves, **78**: 79–106 (1986)

HERSHKOWITZ, DANIEL AND SCHNEIDER, HANS: Lyapunov diagonal semistability of real H-matrices, **71**: 119–149 (1985)

HERZER, ARMIN AND HUPPERT, BERTRAM: Ein Satz von I. Schur uber vertauschbare Matrizen: A theorem of I. Schur on commutative matrices, **71**: 151–158 (1985)

HESS, PETER: On the spectrum of elliptic operators with respect to indefinite weights: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 99–109 (1986)

HESTENES, MAGNUS R.: Pairs of quadratic forms, **1**: 397–407 (1968)

HEUVERS, KONRAD JOHN: On the types of functions which can serve as scalar products in a complex linear space, **6**: 83–96 (1973)

HEYMANN, MICHAEL: *See* Hammer, Jacob

HEYMANN, MICHAEL AND THORPE, JOHN A.: A note on minimal polynomials, **7**: 279–280 (1973)

HIAI, FUMIO: Similarity preserving linear maps on matrices, **97**: 127–139 (1987)

HIGHAM, NICHOLAS J.: Computing real square roots of a real matrix, **88**: 405–430 (1987)

HIGMAN, D. G.: Coherent algebras, **93**: 209–239 (1987)

HILGERS, JOHN W.: A theory for optimal regularization in the finite-dimensional case, **48**: 359–379 (1982)

HILL, RICHARD: *See* Carlson, David

HILL, RICHARD D.: Eigenvalue location using certain matrix functions and geometric curves, **16**: 83–91 (1977)

HILL, RICHARD D.: Inertia theory for simultaneously triangulable complex matrices, **2**: 131–142 (1969)

HILL, RICHARD D.: Linear transformations which preserve hermitian matrices, **6**: 257–262 (1973)

HILL, RICHARD D.: *See* Barker, George Phillip

HILL, RICHARD D.: *See* Oxenrider, Clinton J.

HILL, RICHARD D.: *See* Poluikis, John A.

HILL, RICHARD D.: *See* Waters, Steven R.

HILL, RICHARD D. AND WATERS, STEVEN R.: On the cone of positive semidefinite matrices, **90**: 81–88 (1987)

HILLS, NORMAN L.: Transposing a matrix by similarity operations, **22**: 163–166 (1978)

HINRICHSEN, D. AND KRAUSE, U.: Unique representation in convex sets by extraction of marked components, **51**: 73–96 (1983)

HINRICHSEN, D. AND PRATZEL-WOLTERS, D.: A wild quiver in linear systems theory, **91**: 143–175 (1987)

HIRZEBRUCH, U.: Produkte positiver elemente in formal-reellen Jordan-Algebren, **8**: 263–269 (1974)

HOCHSTADT, HARRY: A contructive approach to the classical canonical form of linear operators, **3**: 347–353 (1970)

HOCHSTADT, HARRY: An inverse spectral theorem for a Hill's matrix, **57**: 21–30 (1984)

HOCHSTADT, HARRY: On the construction of a Jacobi matrix from mixed given data, **28**: 113–115 (1979)

HOCHSTADT, HARRY: On the construction of a Jacobi matrix from spectral data, **8**: 435–446 (1974)

HOCHSTADT, HARRY: On the theory of Hill's matrices and related inverse spectral problems, **11**: 41–52 (1975)

HOCHSTADT, HARRY: *See* Chari, Bhagya

HOCHSTADT, HARRY: *See* Cheung, Shiu Ming

HOCHSTADT, HARRY: *See* Mattis, Michael P.

HOCHSTADT, HARRY AND GOLDBERG, WALLACE: Hill's matrices with some vanishing instability intervals, **97**: 121–126 (1987)

HOCHWALD, SCOTT H.: The uniqueness of the adjoint operation. II, **91**: 107–119 (1987)

HODGES, JOHN H.: *See* Carlitz, L.

HOEKSTRA, A. H. AND STEUTEL, F. W.: Limit theorems for Markov chains of finite rank, **60**: 65–77 (1984)

HOFFMAN, A. J.: Eigenvalues and partitionings of the edges of a graph, **5**: 137–146 (1972)

HOFFMAN, A. J.: On graphs whose least eigenvalue exceeds $-1-\sqrt{2}$, **16**: 153–165 (1977)

HOFFMAN, A. J.: *See* Barnes, E. R.

HOFFMAN, A. J.: *See* Brualdi, R. A.

HOFFMAN, A. J.: *See* Haynsworth, Emilie

HOFFMAN, ALAN: *See* Golub, G. H.

HOFFMAN, ALAN J.: Note on a conjecture of Kojima and Saigal, **71**: 159–160 (1985)

HOFFMAN, ALAN J.: Total unimodularity and combinatorial theorems: Collection of articles dedicated to Olga Taussky Todd, **13**: 103–108 (1976)

HOFFMAN, ALAN J.: *See* Goffin, Jean-Louis

HOFFMAN, D. G.: *See* Grone, Robert D.

HOFFMAN, FREDERICK: Orbits under actions of affine groups over GF(2), **13**: 173–176 (1976)

HOLBROOK, JOHN A. R.: Distortion coefficients for crypto-unitary operators, **19**: 189–205 (1978)

HOLBROOK, JOHN A. R.: Distortion coefficients for cryptocontractions, **18**: 229–256 (1977)

HOLBROOK, JOHN A. R.: Polynomials in a matrix and its commutant, **48**: 293–301 (1982)

HOLBROOK, JOHN A. R.: *See* Bhatia, Rajendra

HOLGATE, P.: Canonical multiplication in the genetic algebra for linked loci, **26**: 281–287 (1979)

HOLGATE, P.: The interpretation of derivations in genetic algebras, **85**: 75–79 (1987)

HONG, YOO PYO, HORN, ROGER A., AND JOHNSON, CHARLES R.: On the reduction of pairs of Hermitian or symmetric matrices to diagonal form by congruence, **73**: 213–226 (1986)

HOOVER, DEAN W.: *See* Marcus, Marvin

HORN, ROGER A.: On inequalities between Hermitian and symmetric forms, **11**: 189–218 (1975)

HORN, ROGER A.: *See* Hong, Yoo Pyo

HORN, ROGER A: *See* Choudhury, Dipa

HORNE, G. J. AND MAGAGNA, L.: Monotonicity of the eigenvalues of birth and death matrices, **3**: 31–43 (1970)

HORNE, J. G.: On ideals of cone preserving maps, **21**: 95–109 (1978)

HORNE, J. G.: On the automorphism group of a cone, **21**: 111–121 (1978)

HOSKINS, W. D.: *See* Andres, T. H.

HOSKINS, W. D., MEEK, D. S., AND WALTON, D. J.: High-order iterative methods for the solution of the matrix equation $XA + AY = F$, **23**: 121–139 (1979)

HOSKINS, W. D. AND MEEK, D. S.: Order invariant properties of some matrices, **21**: 261–269 (1978)

HOSKINS, W. D. AND THOMAS, R. S. D.: Conditions for isonemal arrays on a Cartesian grid, **57**: 87–103 (1984)

HOSKINS, W. D. AND WALTON, D. J.: A faster, more stable method for computing the pth roots of positive definite matrices, **26**: 139–163 (1979)

HOSKINS, W. D. AND WALTON, D. J.: Methods for solving the matrix equation $TB + CT = -A$ and its generalizations, **23**: 217–225 (1979)

HOST, LINDA H.: Tactical decompositions in uniform normal designs, **75**: 105–116 (1986)

HOUCK, DAVID J. AND PAUL, MICHAEL E.: Non-singular 0-1 matrices with constant row and column sums, **22**: 263–266 (1978)

HOUCK, DAVID J. AND PAUL, MICHAEL E.: On a theorem of de Bruijn and Erdos, **23**: 157–165 (1979)

HOUCK, DAVID J. AND PITTENGER, ARTHUR O.: Analytic proofs of a network feasibility theorem and a theorem of Fulkerson, **24**: 151–156 (1979)

HOUSEHOLDER, A. S.: Multigradients and the zeros of transcendental functions, **4**: 175–182 (1971)

HOUSEHOLDER, A. S.: Preface: A. S. Householder, **28**: 1–3 (1 plate) (1979)

HOUSEHOLDER, A. S.: The Pade table, the Frobenius identities, and the qd algorithm, **4**: 161–174 (1971)

HOWARD, RALPH: Linear maps that preserve matrices annihilated by a polynomial, **30**: 167–176 (1980)

HOWE, R. B.: *See* Wibker, E. A.

HOWELL, THOMAS D.: Global properties of tensor rank, **22**: 9–23 (1978)

HOWLAND, JAMES LUCIEN: The sign matrix and the separation of matrix eigenvalues, **49**: 221–232 (1983)

HOWZE, J. W.: *See* Bhattacharyya, S. P.

HSU, I. S., TRUONG, T. K., REED, I. S., AND GLOVER, N.: A VLSI architecture for performing finite field arithmetic with reduced table lookup, **98**: 249–262 (1988)

HSU, L.: *See* Kaszkurewicz, E.

HSUAN, FRANCIS, LANGENBERG, PATRICIA, AND GETSON, ALBERT: The {2}-inverse with applications in statistics, **70**: 241–248 (1985)

HU, HUI: An algorithm for rescaling a matrix positive definite, **96**: 131–147 (1987)

HU, T. C.: On the asymptotic integer algorithm, **3**: 279–294 (1970)

HUANG, C. P.: Computing powers of arbitrary Hessenberg matrices, **21**: 123–134 (1978)

HUDSON, RICHARD H. AND MARKHAM, THOMAS L.: Alfred T. Brauer as a mathematician and teacher, **59**: 1–17 (1984)

HUGHES-HALLETT, A. J.: Techniques which accelerate the convergence of first order iterations automatically, **68**: 115–130 (1985)

HUNG, CHING HSIANG AND MARKHAM, T. L.: The Moore-Penrose inverse of a partitioned matrix $M = \begin{pmatrix} A & D \\ B & C \end{pmatrix}$, **11**: 73–86 (1975)

HUNTER, JEFFREY J.: Generalized inverses and their application to applied probability problems, **45**: 157–198 (1982)

HUNTER, JEFFREY J.: Stationary distributions of perturbed Markov chains, **82**: 201–214 (1986)

HUPPERT, BERTRAM: *See* Herzer, Armin

HUYLEBROUCK, D. AND PUYSTJENS, R.: Generalized inverses of a sum with a radical element: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 289–300 (1986)

HWANG, SUK GEUN: A note on a conjecture on permanents, **76**: 31–44 (1986)

HWANG, SUK GEUN: On a conjecture of E. Dittert, **95**: 161–169 (1987)

HWANG, SUK GEUN: The monotonicity of and the Djokovic conjectures on permanents of doubly stochastic matrices, **79**: 127–151 (1986)

IKEBE, YASUHIKO: On inverses of Hessenberg matrices, **24**: 93–97 (1979)

IKEBE, YASUHIKO: *See* Yamamoto, Tetsuro

ILIN, V. P.: *See* Axelsson, O.

IMAM, I. N.: The Schur complement and the inverse *M*-matrix problem, **62**: 235–240 (1984)

IMAM, I. N.: Tridiagonal and upper triangular inverse *M*-matrices, **55**: 93–104 (1983)

INCERTIS, FERNANDO C.: *See* Hernandez, Vicente G.

IOCHUM, BRUNO: *See* Bellissard, Jean

IONESCU, TUDOR: On the generators of semisimple Lie algebras, **15**: 271–292 (1976)

IPSEN, ILSE C. F.: *See* Delosme, Jean-Marc

IPSEN, ILSE C. F., SAAD, YOUCEF, AND SCHULTZ, MARTIN H.: Complexity of dense-linear-system solution on a multiprocessor ring: Special volume on parallel computing, **77**: 205–239 (1986)

IRI, MASAO: The maximum-rank minimum-term-rank theorem for the pivotal transforms of a matrix, **2**: 427–446 (1969)

ISAACS, I. M.: Automorphisms of matrix algebras over commutative rings, **31**: 215–231 (1980)

ISAACSON, DEAN AND SENETA, E.: Ergodicity for countable inhomogeneous Markov chains, **48**: 37–44 (1982)

ISHAQ, M. AND MERRIS, RUSSELL: Matrix functions afforded by entries of unitary representations, **25**: 255–269 (1979)

ISHIBASHI, HIROYUKI: Generation of classical groups over finite fields, **51**: 9–15 (1983)

ISHIBASHI, HIROYUKI: *See* Ellers, Erich W.

ISHIHARA, KAZUO: Strong and weak discrete maximum principles for matrices associated with elliptic problems, **88**: 431–448 (1987)

ITO, TATSURO: Bipartite distance-regular graphs of valency three, **46**: 195–213 (1982)

IUSEM, ALFREDO N.: *See* De Pierro, Alvaro R.

JACOBSON, D. H.: Factorization of symmetric M-matrices, **9**: 275–278 (1974)

JACOBSON, D. H.: *See* Martin, D. H.

JAFARIAN, A. A.: *See* Choi, M. D.

JAIN, S. K.: Overdetermined linear systems satisfying nonnegativity constraints, **57**: 205–213 (1984)

JAIN, S. K., GOEL, V. K., AND KWAK, EDWARD K.: Nonnegative mth roots of nonnegative 0-symmetric idempotent matrices, **23**: 37–51 (1979)

JAIN, S. K. AND GOEL, V. K.: Nonnegative matrices having nonnegative Drazin pseudoinverses, **29**: 173–183 (1980)

JAMES, N. S. AND LIDL, R.: Permutation polynomials on matrices, **96**: 181–190 (1987)

JAMISON, ROBERT E.: Finding little hyperplanes in bigger ones, **35**: 11–19 (1981)

JEA, KANG C.: *See* Young, David M.

JEA, KANG C. AND YOUNG, DAVID M.: On the simplification of generalized conjugate-gradient methods for nonsymmetrizable linear systems, **52**: 399–417 (1983)

JEFFRIES, CLARK: Qualitative stability of certain nonlinear systems, **75**: 133–144 (1986)

JEFFRIES, CLARK, KLEE, VICTOR, AND VAN DEN DRIESSCHE, PAULINE: Qualitative stability of linear systems, **87**: 1–48 (1987)

JENSEN, PAUL S.: An inclusion theorem related to inverse iteration, **6**: 209–215 (1973)

JETER, M. W. AND PYE, W. C.: A note on nonnegative rank factorizations, **38**: 171–173 (1981)

JETER, MELVYN W.: *See* Pye, W. C.

JETER, MELVYN W. AND PYE, WALLACE C.: Nonnegative (s, t)-potent matrices, **45**: 109–121 (1982)

JETER, MELVYN W. AND PYE, WALLACE C.: Some properties of Q-matrices, **57**: 169–180 (1984)

JETER, MELVYN W. AND PYE, WALLACE C.: The linear complementarity problem and a subclass of fully semimonotone matrices, **87**: 243–256 (1987)

JIA, RONG QING: *See* de Boor, C.

JIANG, ER XIONG: On spectral variation of a nonnormal matrix, **42**: 223–241 (1982)

JIANG, ER XIONG AND ZHANG, ZHEN YUE: A new shift of the QL algorithm for irreducible symmetric tridiagonal matrices, **65**: 261–272 (1985)

JODAR, LUCAS: Boundary value problems and Cauchy problem for the second-order Euler

operator differential equation, **91**: 1–12 (1987)

JODAR, LUCAS: Boundary value problems for second-order differential operator equations, **83**: 29–38 (1986)

JOE, HARRY: An ordering of dependence for contingency tables, **70**: 89–103 (1985)

JOHNSEN, E. C.: Essentially doubly stochastic matrices. I. Elements of the theory over arbitrary fields, **4**: 255–282 (1971)

JOHNSEN, E. C.: Essentially doubly stochastic matrices. II. Canonical forms for row equivalence, equivalence, and a special case of congruence, **8**: 121–127 (1974)

JOHNSEN, E. C.: Essentially stochastic matrices —factorizations into elementary and quasi-elementary matrices, **17**: 79–93 (1977)

JOHNSEN, E. C.: Stochastic matrices. I. Similarity via stochastic transforms, **29**: 185–193 (1980)

JOHNSON, C. R.: *See* DePrima, C. R.

JOHNSON, CHARLES R.: A local Lyapunov theorem and the stability of sums: Collection of articles dedicated to Olga Taussky Todd, **13**: 37–43 (1976)

JOHNSON, CHARLES R.: An inequality for matrices whose symmetric part is positive definite, **6**: 13–18 (1973)

JOHNSON, CHARLES R.: Closure properties of certain positivity classes of matrices under various algebraic operations, **97**: 243–247 (1987)

JOHNSON, CHARLES R.: D-stability and real and complex quadratic forms, **9**: 89–94 (1974)

JOHNSON, CHARLES R.: Inverse M-matrices, **47**: 195–216 (1982)

JOHNSON, CHARLES R.: Multiplicativity and compatibility of generalized matrix norms, **16**: 25–37 (1977)

JOHNSON, CHARLES R.: Normality and the numerical range, **15**: 89–94 (1976)

JOHNSON, CHARLES R.: Numerical ranges of principal submatrices, **37**: 23–34 (1981)

JOHNSON, CHARLES R.: Power inequalities and spectral dominance of generalized matrix norms, **28**: 117–130 (1979)

JOHNSON, CHARLES R.: Sign patterns of inverse nonnegative matrices, **55**: 69–80 (1983)

JOHNSON, CHARLES R.: *See* Barrett, Wayne W.

JOHNSON, CHARLES R.: *See* Berman, Abraham

JOHNSON, CHARLES R.: *See* Fiedler, Miroslav

JOHNSON, CHARLES R.: *See* Grone, Robert

JOHNSON, CHARLES R.: *See* Hershkowitz, Daniel

JOHNSON, CHARLES R.: *See* Hong, Yoo Pyo

JOHNSON, CHARLES R. AND BARRETT, WAYNE W.: Spanning-tree extensions of the Hadamard-Fischer inequalities, **66**: 177–193 (1985)

JOHNSON, CHARLES R. AND ELSNER, LUDWIG: The relationship between Hadamard and conventional multiplication for positive definite matrices, **92**: 231–240 (1987)

JOHNSON, CHARLES R., KUMAR, RAVINDER, AND WOLKOWICZ, HENRY: Lower bounds for the spread of a matrix, **71**: 161–173 (1985)

JOHNSON, CHARLES R., LEIGHTON, FRANK THOMSON, AND ROBINSON, HERBERT A.: Sign patterns of inverse-positive matrices, **24**: 75–83 (1979)

JOHNSON, CHARLES R., OLESKY, D. D., ROBERTSON, BRIAN, AND VAN DEN DRIESSCHE, P.: Sign determinacy of M-matrix minors, **91**: 133–141 (1987)

JOHNSON, CHARLES R. AND ROBINSON, HERBERT A.: Eigenvalue inequalities for principal submatrices, **37**: 11–22 (1981)

JOHNSON, CHARLES R., UHLIG, FRANK, AND WARNER, DAN: Sign patterns, nonsingularity, and the solvability of $Ax = b$, **47**: 1–9 (1982)

JOHNSON, GREGERY A.: A generalization of N-matrices, **48**: 201–217 (1982)

JOHNSON, GREGERY A.: Inverse N_0-matrices, **64**: 215–222 (1985)

JOHNSON, GREGERY A.: Partitioned matrices satisfying certain null space properties, **57**: 75–85 (1984)

JOHNSON, JAMES J.: Bounds for certain permanents and determinants, **8**: 57–64 (1974)

JOHNSON, JAMES J.: On partially non-positive matrices, **8**: 185–187 (1974)

JOHNSTON, R. L.: Gerschgorin theorems for partitioned matrices, **4**: 205–220. (1971)

JOHNSTON, R. L. AND OLESKY, D. D.: Best pseudo-isolated Gerschgorin disks for eigenvalues, **10**: 55–67 (1975)

JOLY, J. L.: *See* Gastinel, N.

JONCKHEERE, EDMOND A.: New bound on the

sensitivity of the solution of the Lyapunov equation, **60**: 57–64 (1984)

JONGEN, H. TH., MOBERT, T. , RUCKMANN, J., AND TAMMER, K.: On inertia and Schur complement in optimization, **95**: 97–109 (1987)

JOUBERT, WAYNE D. AND YOUNG, DAVID M.: Necessary and sufficient conditions for the simplification of generalized conjugate-gradient algorithms, **88**: 449–485 (1987)

JOYCE, G. T. AND BARNETT, S.: Remarks on the inertia of a matrix, **3**: 1–5 (1970)

JUNGNICKEL, UWE: *See* Heinig, Georg

JURY, E. I.: Comments on the stability criterion of Lienard and Chipart, **47**: 169–171 (1982)

JURY, E. I.: *See* Barnett, S.

KABE, D. G.: On a multivariate normal probability minimization problem, **67**: 103–109 (1985)

KAGSTROM, BO: *See* Demmel, James Weldon

KAHANE, JOSEPH: Grassman algebras for proving a theorem on Pfaffians, **4**: 129–136 (1971)

KAILATH, T.: *See* Friedlander, B.

KAILATH, T.: *See* Gohberg, I.

KAILATH, T., BRUCKSTEIN, A., AND MORGAN, D.: Fast matrix factorizations via discrete transmission lines, **75**: 1–25 (1986)

KAILATH, T. AND KOLTRACHT, I.: Matrices with block Toeplitz inverses, **75**: 145–153 (1986)

KAILATH, THOMAS: *See* Bistritz, Yuval

KAILATH, THOMAS: *See* Bruckstein, Alfred

KAILATH, TOM: *See* Genin, Yves

KALA, R.: *See* Baksalary, J. K.

KAMEN, EDWARD W.: The poles and zeros of a linear time-varying system, **98**: 263–289 (1988)

KAMP, Y.: *See* Delsarte, P.

KANEKO, IKUYO: A reduction theorem for the linear complementarity problem with a certain patterned matrix, **21**: 13–34 (1978)

KANEKO, IKUYO: Linear complementarity problems and characterizations of Minkowski matrices, **20**: 111–129 (1978)

KANEKO, IKUYO AND PANG, JONG SHI: Some n by dn linear complementarity problems, **34**: 297–319 (1980)

KANKAANPAA, HILKKA, MERIKOSKI, JORMA KAARLO, AND VIRTANEN, ARI: Improving an inequality for sums of elements of matrix powers, **92**: 225–229 (1987)

KANNAPPAN, PL.: *See* Chung, J. K.

KAPLANSKY, IRVING: *See* Butler, William

KAPOOR, J.: n-square matrices which, under row permutations, leave the $(n-1)$th elementary symmetric function invariant, **5**: 113–121 (1972)

KAPOOR, J.: Orthogonal matrices as linear combinations of permutation matrices, **12**: 189–196 (1975)

KARLIN, SAMUEL AND OST, FRIEDEMANN: Some monotonicity properties of Schur powers of matrices and related inequalities, **68**: 47–65 (1985)

KARLIN, SAMUEL AND PINKUS, ALLAN: Oscillation properties of generalized characteristic polynomials for totally positive and positive definite matrices, **8**: 281–312 (1974)

KARLIN, SAMUEL AND RINOTT, YOSEF: M-matrices as covariance matrices of multinormal distributions, **52**: 419–438 (1983)

KASAMI, TADAO AND LIN, SHU: The binary weight distribution of the extended $(2^m, 2^m - 4)$ code of the Reed-Solomon code over GF(2^m) with generator polynomial $(x-\alpha)(x-\alpha^2)(x-\alpha^3)$, **98**: 291–307 (1988)

KASZKUREWICZ, E. AND HSU, L.: On two classes of matrices with positive diagonal solutions to the Lyapunov equation, **59**: 19–27 (1984)

KATO, TOSIO: *See* Cohen, Joel E.

KATZ, IRVING J.: Theorems on products of EPr matrices. II, **10**: 37–40 (1975)

KATZ, IRVING J.: *See* Baskett, Thomas S.

KATZ, IRVING J.: *See* Bevis, Jean H.

KATZ, IRVING J.: *See* Hall, Frank J.

KATZ, IRVING J.: *See* Hartwig, Robert E.

KATZ, IRVING JACK: Remarks on two recent results in matrix theory, **5**: 109–112 (1972)

KATZ, MOSHE: *See* Friedland, Shmuel

KAUFMAN, LINDA: The generalized Householder transformation and sparse matrices, **90**: 221–234 (1987)

KAUFMAN, LINDA: *See* Bunch, James R.

KAUFMAN, LINDA: *See* Dongarra, Jack J.

KAUL, R. N. AND RANI, OMA: A theorem of Fritz John in complex programming, **7**: 217–232 (1973)

KAUSTSKY, J. AND GOLUB, G. H.: On the calculation of Jacobi matrices, **52(53)**: 439–455 (1983)

KAYKOBAD, M.: On nonnegative factorization of matrices, **96**: 27–33 (1987)

KAYKOBAD, M.: Positive solutions of a class of linear systems, **72**: 97–105 (1985)

KAYKOBAD, M.: Positive solutions of positive linear systems, **64**: 133–140 (1985)

KEEL, L. H.: *See* Bhattacharyya, S. P.

KELLER-MCNULTY, S. AND KENNEDY, W. J.: Error-free computation of a reflexive generalized inverse, **67**: 157–167 (1985)

KELLOGG, R. B. AND STEPHENS, A. B.: Complex eigenvalues of a non-negative matrix with a specified graph, **20**: 179–187 (1978)

KELLOGG, R. BRUCE: Matrices similar to a positive or essentially positive matrix, **4**: 191–204 (1971)

KELLY, FRANK P.: *See* Cohen, Joel E.

KELLY, L. M. AND WATSON, L. T.: Q-matrices and spherical geometry, **25**: 175–189 (1979)

KEMENY, JOHN G.: Generalization of a fundamental matrix, **38**: 193–206 (1981)

KENNEDY, W. J.: *See* Keller-McNulty, S.

KERSHAW, D.: *QD* algorithms and algebraic eigenvalue problems, **54**: 53–75 (1983)

KERSHAW, D.: An analysis of the method of L. Fox and L. Hayes for the factorization of a polynomial, **86**: 179–187 (1987)

KESSLER, OFRA AND BERMAN, ABRAHAM: Matrices with a transitive graph and inverse *M*-matrice, **71**: 175–185 (1985)

KESTENBAND, BARBU C.: Finite projective geometries that are incidence structures of caps, **48**: 303–313 (1982)

KEZLAN, T. P.: *See* Barker, G. P.

KHARGONEKAR, PRAMOD P., GEORGIOU, TRYPHON T., AND OZGULER, A. BULENT: Skew-prime polynomial matrices: the polynomial-model approach, **50**: 403–435 (1983)

KHARGONEKAR, PRAMOD P. AND OZGULER, A. BULENT: System-theoretic and algebraic aspects of the rings of stable and proper stable rational functions, **66**: 123–167 (1985)

KHARGONEKAR, PRAMOD P. AND POOLLA, KAMESHWAR R.: Polynomial matrix-fraction representations for linear time-varying systems, **80**: 1–37 (1986)

KHATRI, C. G.: A generalization of Lavoie's inequality concerning the sum of idempotent matrices, **54**: 97–108 (1983)

KHATRI, C. G.: A note on idempotent matrices, **70**: 185–195 (1985)

KHATRI, C. G.: Powers of matrices and idempotency, **33**: 57–65 (1980)

KHATRI, C. G. AND SHAH, K. R.: Orthogonality in multiway classifications, **82**: 215–224 (1986)

KIELBASINSKI, ANDRZEJ: A note on rounding-error analysis of Cholesky factorization, **88**: 487–494 (1987)

KIM, JIN BAI: On *r*-potent linear mappings, **10**: 69–70 (1975)

KIM, JIN BAI: On the number of idempotent linear transformations, **8**: 313–325 (1974)

KIM, K. H.: An extension of the Dulmage-Mendelsohn theorem, **27**: 187–197 (1979)

KIM, K. H. AND ROUSH, F. W.: Expressions for certain minors and permanents, **41**: 93–97 (1981)

KIM, K. H. AND ROUSH, F. W.: Generating all linear transformations, **37**: 97–101 (1981)

KIM, K. H. AND ROUSH, F. W.: The group-theoretic complexity of subsemigroups of Boolean matrices, **25**: 289–297 (1979)

KIM, KI HANG: *See* Bruning, Jochen

KIM, KI HANG AND ROUSH, FRED W.: Inverses of Boolean matrices, **22**: 247–262 (1978)

KIM, KI HANG AND ROUSH, FRED W.: On a conjecture of Erdos and Renyi, **23**: 179–189 (1979)

KITTAPPA, R. K.: A generalization of the rotation matrix and related results, **92**: 251–258 (1987)

KLACZYNSKI, K.: *See* Baksalary, J. K.

KLEE, VICTOR: Recursive structure of S-matrices and an $O(m^2)$ algorithm for recognizing strong sign solvability, **96**: 233–247 (1987)

KLEE, VICTOR: *See* Jeffries, Clark

KLEE, VICTOR, LADNER, RICHARD, AND MANBER, RACHEL: Signsolvability revisited, **59**: 131–157 (1984)

KLEIN, D. J.: Treediagonal matrices and their inverses, **42**: 109–117 (1982)

KLIEM, WOLFHARD: *See* Pommer, Christian

KLINGLER, LEE: *See* Brewer, James

KLINGLER, LEE AND LEVY, LAWRENCE S.: Sweeping-similarity of matrices, **75**: 67–104 (1986)

KNUPPEL, FRIEDER AND NIELSEN, KLAUS: On products of two involutions in the orthogonal group of a vector space, **94**: 209–216 (1987)

KNUPPEL, FRIEDER AND NIELSEN, KLAUS: Products of involutions in $O^+(V)$, **94**: 217–222 (1987)

KOBILINSKY, A.: *See* El Mossadeq, A.

KOBILINSKY, ANDRE: Confounding in relation to duality of finite abelian groups, **70**: 321–347 (1985)

KOECHER, MAX: The generalized inverse of integral matrices, **71**: 187–198 (1985)

KOELLING, D. D.: *See* Dongarra, J. J.

KOH, KWANGIL: On the matrix ring over a finite field, **66**: 195–197 (1985)

KOJIMA, M. AND SAIGAL, R.: A property of matrices with positive determinants, **30**: 1–8 (1980)

KOLTRACHT, I.: *See* Gohberg, I.

KOLTRACHT, I.: *See* Kailath, T.

KOMIYA, HIDETOSHI: Necessary and sufficient conditions for multivariate majorization, **55**: 147–154 (1983)

KONIG, DENES: The life and scientific work of Denes Konig (1884–1944), **21**: 189–205 (1978)

KONIG, HERMANN: Eigenvalues of compact operators with applications to integral operators: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 111–122 (1986)

KORTE, BERNHARD: *See* Bachem, Achim

KOŠIR, TOMAŽ: Common Jordan chains of matrices, **99**: 253–258 (1988)

KOSTREVA, MICHAEL M.: Block pivot methods for solving the complementarity problem, **21**: 207–215 (1978)

KOTZIG, ANTON: *See* Berman, Abraham

KOVACS, AMOS: Some enumeration problems for matrices over a finite field, **94**: 223–236 (1987)

KOVARIK, Z. V.: Compatibility of approximate solutions of inaccurate linear equations, **15**: 217–225 (1976)

KOVARIK, Z. V.: Minimal compatible solutions of linear equations, **17**: 95–106 (1977)

KOVARIK, Z. V.: Spectrum localization in Banach spaces. I, **8**: 225–236 (1974)

KOVARIK, Z. V.: Spectrum localization in Banach spaces. II, **12**: 223–229 (1975)

KOVARIK, Z. V. AND OLESKY, D. D.: Sharpness of generalized Gerschgorin disks, **8**: 477–482 (1974)

KOVARIK, ZDISLAV V.: Manifolds of frames of projectors, **31**: 151–158 (1980)

KOVARIK, ZDISLAV V.: Manifolds of linear involutions, **24**: 271–287 (1979)

KOVARIK, ZDISLAV V. AND SHERIF, NAGWA: Characterization of similarities between two n-frames of projectors, **57**: 57–69 (1984)

KOVARIK, ZDISLAV V. AND SHERIF, NAGWA: Geodesics and near-geodesics in the manifolds of projector frames, **99**: 259–277 (1988)

KOVARIK, ZDISLAV V. AND SHERIF, NAGWA: Perturbation of invariant subspaces, **64**: 93–113 (1985)

KRAFFT, OLAF: A matrix optimization problem, **51**: 137–142 (1983)

KRAMARZ, LUIS: Algebraic perturbation methods for the solution of singular linear systems, **36**: 79–88 (1981)

KRANZER, HERBERT C.: *See* Gorelick, Michael R.

KRAUSE, U.: *See* Hinrichsen, D.

KRAUSE, ULRICH: *See* Fujimoto, Takao

KRAUTER, ARNOLD R.: On the greatest distance between two permanental roots of a matrix, **93**: 39–55 (1987)

KRAVVARITIS, DIMITRIOS AND STAVRAKAKIS, NICOLAOS: Perturbations of maximal monotone random operators: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 301–310 (1986)

KRESS, RAINER, DE VRIES, HANS LUDWIG, AND WEGMANN, RUDOLF: On nonnormal matrices, **8**: 109–120 (1974)

KRISHNA, LALA B.: On the convergence of the symmetric successive overrelaxation method, **56**: 185–194 (1984)

KRUSKAL, JOSEPH B.: Three-way arrays: rank and uniqueness of trilinear decompositions, with application to arithmetic complexity and statistics, **18**: 95–138 (1977)

KUHN, DIETER AND LOWEN, RAINER: Piecewise affine bijections of $\mathbf{R}^n$, and the equation $Sx^+ - Tx^- = y$, **96**: 109–129 (1987)

KUMAR, RAVINDER: *See* Johnson, Charles R.

KUMAR, VIJAYA, RAO, S. B., AND SINGHI, N. M.: Graphs with eigenvalues at least–2, **46**: 27–42 (1982)

KUNG, JOSEPH P. S.: The cycle structure of a linear transformation over a finite field, **36**: 141–155 (1981)

KUO, I WEN: A note on factorizations of singular M-matrices, **16**: 217–220 (1977)

KUO, I WEN: The Moore-Penrose inverses of singular M-matrices, **17**: 1–14 (1977)

KUO, YUEH ER: Some properties of tensor products of matrices, **7**: 63–70 (1973)

KUO, YUEH-ER: Some extensions of the elementary divisor theorem of linear algebra, **2**: 57–64 (1969)

KWAK, EDWARD K.: *See* Jain, S. K.

KWONG, MAN KAM: Conditions under which the order of two non-negative Hermitian matrices is preserved when taking integral powers, **18**: 223–228 (1977)

KWONG, MAN KAM: *See* Bapat, R. B.

LADNER, RICHARD: *See* Klee, Victor

LAFFEY, T. J.: *See* Deutsch, E.

LAFFEY, T. J.: *See* Gaines, F. J.

LAFFEY, T. J.: *See* Gow, R.

LAFFEY, THOMAS J.: A counterexample to Kippenhahn's conjecture on Hermitian pencils, **51**: 179–182 (1983)

LAFFEY, THOMAS J.: A criterion for generating full matrix algebras, **37**: 191–198 (1981)

LAFFEY, THOMAS J.: A normality criterion for an algebra of matrices, **25**: 169–174 (1979)

LAFFEY, THOMAS J.: A note on matrix subalgebras containing a full Jordan block, **37**: 187–189 (1981)

LAFFEY, THOMAS J.: Algebras generated by two idempotents, **37**: 45–53 (1981)

LAFFEY, THOMAS J.: Irredundant generating sets for matrix algebras, **52**: 457–478 (1983)

LAFFEY, THOMAS J.: Simultaneous quasidiagonalization of complex matrices, **16**: 189–201 (1977)

LAFFEY, THOMAS J.: Simultaneous reduction of sets of matrices under similarity: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 123–138 (1986)

LAFFEY, THOMAS J.: Simultaneous triangularization of a pair of matrices whose commutator has rank two, **29**: 195–203 (1980)

LAFFEY, THOMAS J.: The minimal dimension of maximal commutative subalgebras of full matrix algebras, **71**: 199–212 (1985)

LAFFEY, THOMAS J.: *See* Aupetit, Bernard

LAFFEY, THOMAS J.: *See* Gaines, Fergus J.

LAFFEY, THOMAS J.: *See* Hannah, John

LAFFEY, THOMAS J. AND MCQUILLAN, DONALD L.: A note on subfields of matrix rings, **16**: 1–3 (1977)

LAFON, JEAN-CLAUDE: Optimum computation of p bilinear forms, **10**: 225–240 (1975)

LAM, CLEMENT W. H.: *See* Seberry, Jennifer

LAM, CLEMENT WING HONG: On rational circulants satisfying $A^2 = d1 + \lambda J$, **12**: 139–150 (1975)

LANCASTER, P.: *See* Gohberg, I.

LANCASTER, P., LERER, L., AND TISMENETSKY, M.: Factored forms for solutions of $AX\text{-}XB = C$ and $X\text{-}AXB = C$ in companion matrices, **62**: 19–49 (1984)

LANCASTER, P. AND MAROULAS, J.: Selective perturbation of spectral properties of vibrating systems using feedback, **98**: 309–330 (1988)

LANCASTER, P. AND PATTABHIRAMAN, M. V.: The local determination of Jordan bases for H-selfadjoint operators, **48**: 191–199 (1982)

LANCASTER, P. AND TISMENETSKY, M.: Inertia characteristics of selfadjoint matrix polynomials, **52**: 479–496 (1983)

LANCASTER, P. AND WEBBER, P. N.: Jordan chains for λ matrices, **1**: 563–569 (1968)

LANCASTER, PETER: A fundamental theorem on lambda-matrices with applications. I. Ordinary differential equations with constant coefficients, **18**: 189–211 (1977)

LANCASTER, PETER: A fundamental theorem on lambda-matrices with applications. II. Difference equations with constant coefficients, **18**: 213–222 (1977)

LANCASTER, PETER: Common eigenvalues, divisors, and multiples of matrix polynomials: a review: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 139–160 (1986)

LANDAU, H. J. AND ODLYZKO, A. M.: Bounds for eigenvalues of certain stochastic matrices, **38**: 5–15 (1981)

LANDIS, T. L.: *See* Parlett, B. N.

LANGENBERG, PATRICIA: *See* Hsuan, Francis

LANGENHOP, C. E.: A row reduction of λ-matrices, **9**: 185–198 (1974)

LANGENHOP, C. E.: The Laurent expansion for a nearly singular matrix, **4**: 329–340 (1971)

LANGENHOP, C. E.: The inverse of a matrix polynomial, **16**: 267–284 (1977)

LANGENHOP, CARL E.: On the invertibility of a nearly singular matrix, **7**: 361–365 (1973)

LANGER, HEINZ AND NAJMAN, BRANKO: Some interlacing results for indefinite Hermitian matrices, **69**: 131–154 (1985)

LANSKI, CHARLES: *See* Guralnick, Robert

LARATTA, A.: *See* Arioli, M.

LARSON, LOREN C.: *See* Coxson, Pamela G.

LASZLO, L.: Matrix methods for polynomials, **36**: 129–131 (1981)

LASZLO, LAJOS: A bandstructure-invariant deflation for real symmetric matrices, **33**: 9–13 (1980)

LASZLO, LAJOS: Imaginary part bounds on polynomial zeros, **44**: 173–180 (1982)

LAU, CONY M. AND MARKHAM, THOMAS L.: Factorization of nonnegative matrices. II, **20**: 51–56 (1978)

LAU, K. K. AND RIHA, W. O. J.: Characterization of best approximations in normed linear spaces of matrices by elements of finite-dimensional linear subspaces, **35**: 109–120 (1981)

LAUCHLI, PETER: Algebraic reduction of electrical multiterminal networks, **1**: 537–561 (1968)

LAVOIE, J.-L.: A determinantal inequality involving the Moore-Penrose inverse, **31**: 77–80 (1980)

LAWRENCE, JIM: Oriented matroids and multiply ordered sets, **48**: 1–12 (1982)

LAWRENCE, JIM AND WEINBERG, LOUIS: Unions of oriented matroids, **41**: 183–200 (1981)

LAWSON, J. D.: *See* Freedman, H. I.

LAWSON, LINDA MARIE: Computational methods for generalized inverse matrices arising from proper splittings, **12**: 111–126 (1975)

LAX, ANNELI AND LAX, PETER D.: On sums of squares, **20**: 71–75 (1978)

LAX, PETER D.: *See* Lax, Anneli

LAY, D. C.: *See* Ben-Artzi, A.

LAY, DAVID: *See* Ellis, Robert L.

LAYTON, W. AND MORLEY, T. D.: On central difference approximations to general second order elliptic equations, **97**: 65–75 (1987)

LEDERMANN, WALTER: The mathematical work of Walter Ledermann, **69**: iii, 1–8 (1985)

LEE, ANNA: Centro-Hermitian and skew-centro-Hermitian matrices, **29**: 205–210 (1980)

LEE, GEOFFREY M.: *See* Brualdi, Richard A.

LEE, JOHN W.: *See* Anselone, Philip M.

LEE, S. L.: B-splines for cardinal Hermite interpolation, **12**: 269–280 (1975)

LEFEVRE-PERCSY, CHRISTIANE: Geometries with dual affine planes and symplectic quadrics, **42**: 31–37 (1982)

LEHNIGK, SIEGFRIED H.: On the Hermite matrix of a polynomial, **4**: 407–419 (1971)

LEIGHTON, FRANK THOMSON: *See* Johnson, Charles R.

LEITMAN, M. J.: On the spectra of a family of positive matrices, **37**: 251–258 (1981)

LEMKE, C. E.: *See* Cottle, R. W.

LEMPEL, ABRAHAM: Characterization and synthesis of self-complementary normal bases in finite fields, **98**: 331–346 (1988)

LENT, A.: *See* Eggermont, P. P. B.

LERER, L.: *See* Gohberg, I.

LERER, L.: *See* Lancaster, P.

LERER, L. AND TISMENETSKY, M.: Generalized Bezoutian and matrix equations, **99**: 123–160 (1988)

LERON, URI: Matrix methods in decompositions of modules, **31**: 159–171 (1980)

LEUNG, PUI LAM: *See* Muirhead, Robb J.

LEUZE, MICHAEL R.: Parallel triangularization of substructured finite element problems: Special volume on parallel computing, **77**: 241–258 (1986)

LEVINE, JACK: *See* Brawley, J. V.

LEVINGER, B. W.: Minimal Gerschgorin sets. III, **2**: 13–19 (1969)

LEVINGER, BERNARD W.: A generalization of the Camion-Hoffman theorem, **5**: 227–232 (1972)

LEVOW, ROY B.: A problem of Mirsky concerning nonsingular doubly stochastic matrices, **5**: 197–206 (1972)

LEVY, LAWRENCE S.: *See* Klingler, Lee

LEWIN, MORDECHAI: *See* Brualdi, Richard A.

LEWIN, MORDECHAI AND NEUMANN, MICHAEL: On the inverse M-matrix problem for (0, 1)-matrices, **30**: 41–50 (1980)

LEWIS, D. W.: A determinantal identity for skewfields, **71**: 213–217 (1985)

LEWIS, D. W.: The isometry classification of Hermitian forms over division algebras, **43**: 245–272 (1982)

LEWIS, JOHN W.: *See* Eisenstat, Stanley C.

LEWIS, T. O.: *See* Pavur, R. J.

LI, CHI KWONG: A generalization of spectral radius, numerical radius, and spectral norm, **90**: 105–118 (1987)

LI, CHI KWONG: On the higher numerical radius and spectral norm, **80**: 55–70 (1986)

LI, CHI KWONG: The decomposable numerical radius and numerical radius of a compound matrix, **76**: 45–58 (1986)

LI, HORNG JAAN: *See* Cheng, Sui-Sun

LI, QIAO: *See* Brualdi, Richard A.

LI, QIAO: *See* Shao, Jia Yu

LI, T.-Y. AND SAUER, T.: Homotopy method for generalized eigenvalue problems $Ax = \lambda Bx$, **91**: 65–74 (1987)

LICKTEIG, THOMAS: Typical tensorial rank, **69**: 95–120 (1985)

LIDL, R.: *See* James, N. S.

LIEBLER, R. A.: *See* Cameron, P. J.

LIM, M. H.: *See* Chan, G. H.

LIM, M. H. AND ONG, HOCK: Linear transformations on symmetric matrices that preserve the permanent, **21**: 143–151 (1978)

LIM, MING HUAT: *See* Chan, Gin-Hor

LIMA, RICARDO: *See* Bellissard, Jean

LIMEBEER, D. J. N. AND ANDERSON, B. D. O.: An interpolation theory approach to H^∞ controller degree bounds, **98**: 347–386 (1988)

LIN, SHU: *See* Kasami, Tadao

LIN, WEN WEI: A new method for computing the closed-loop eigenvalues of a discrete-time algebraic Riccati equation, **96**: 157–180 (1987)

LIN, WEN-WEI: An algorithm for computing the eigenstructure of a regular matrix polynomial, **91**: 195–211 (1987)

LIN, WEN-WEI: On reducing infinite eigenvalues of regular pencils by a nonequivalence transformation, **78**: 207–231 (1986)

LINDQUIST, ANDERS: *See* Gragg, William B.

LINDQVIST, BO HENRY: Nonnegative multiplicative processes reaching stationarity in finite time, **86**: 75–90 (1987)

LIPITAKIS, ELIAS A.: Approximate root-free factorization techniques for solving elliptic difference equations in three space variables, **76**: 247–269 (1986)

LIPMAN, MARC J.: The linear index of a group representation, **31**: 43–54 (1980)

LIPOW, PETER R. AND SCHOENBERG, I. J.: Cardinal interpolation and spline functions. III. Cardinal Hermite interpolation, **6**: 273–304 (1973)

LIU, JOSEPH: *See* George, Alan

LIU, JOSEPH W. H.: *See* George, Alan

LJUNG, L.: *See* Friedlander, B.

LLOYD, S.: *See* Atkinson, M. D.

LOEBL, RICHARD I. AND PAULSEN, VERN I.: Some remarks on C*-convexity, **35**: 63–78 (1981)

LOEWY, R.: Determinants of nonprincipal submatrices of positive semidefinite matrices, **56**: 1–16 (1984)

LOEWY, R.: *See* Hartfiel, D. J.

LOEWY, RAPHAEL: Determinants of nonprincipal submatrices of normal matrices, **52**: 497–507 (1983)

LOEWY, RAPHAEL: On a theorem about the location of eigenvalues of matrices, **4**: 233–242 (1971)

LOEWY, RAPHAEL: On ranges of real Lyapunov transformations: Collection of articles dedicated to Olga Taussky Todd, **13**: 79–89 (1976)

LOEWY, RAPHAEL: Principal minors and diagonal similarity of matrices, **78**: 23–64 (1986)

LOEWY, RAPHAEL: Quadratic forms on completely symmetric spaces, **29**: 211–216 (1980)

LOEWY, RAPHAEL: *See* Barker, George Phillip

LOEWY, RAPHAEL: *See* Carlson, David

LOEWY, RAPHAEL AND SCHNEIDER, HANS: Indecomposable cones, **11**: 235–245 (1975)

LOEWY, RAPHAEL AND TAM, BIT SHUN: Complementation in the face lattice of a proper cone, 79: 195–207 (1986)

LOGAN, J. DAVID: *See* Curtis, W. D.

LOIZOU, G.: *See* Fenner, T. I.

LONDON, DAVID: Monotonicity of permanents of certain doubly stochastic circulant matrices, 37: 235–249 (1981)

LONDON, DAVID: On the van der Waerden conjecture and zeros of polynomials, 45: 35–41 (1982)

LONDON, DAVID: Some notes on the van der Waerden conjecture, 4: 155–160 (1971)

LONG, ANDREW F. AND VAUGHAN, THERESA P.: Factorization of $Q(h(T)(x))$ over a finite field where $Q(x)$ is irreducible and $h(T)(x)$ is linear. I, 13: 207–221 (1976)

LONG, ANDREW F., JR. AND VAUGHAN, THERESA P.: Factorization of $Q(h(T)(x))$ over a finite field, where $Q(x)$ is irreducible and $h(T)(x)$ is linear. II, 11: 53–72 (1975)

LONG, J. P. AND CULLEN, C. G.: Intrinsic functions on complex semisimple algebras, 3: 429–440 (1970)

LONG, J. P. AND CULLEN, C. G.: Intrinsic functions on real semisimple algebras, 9: 199–208 (1974)

LONGSINE, D. E. AND MCCORMICK, S. F.: Simultaneous Rayleigh-quotient minimization methods for $Ax = \lambda Bx$, 34: 195–234 (1980)

LONGSTAFF, W. E.: On the operation Alg Lat in finite dimensions, 27: 27–29 (1979)

LONGSTAFF, W. E.: Picturing the lattice of invariant subspaces of a nilpotent complex matrix, 56: 161–168 (1984)

LONGSTAFF, W. E.: *See* Fillmore, P. A.

LORENZ, JENS: Resonance in equations with a diagonal field, 38: 103–107 (1981)

LORENZ, JENS AND MACKENS, WOLFGANG: Toeplitz matrices with totally nonnegative inverses, 24: 133–141 (1979)

LOU, SHELDON X.-C., VERGHESE, GEORGE C., WILLSKY, ALAN S., AND COXSON, PAMELA G.: Conditions for scale-based decompositions in singularly perturbed systems, 98: 387–413 (1988)

LOUGHLIN, TIMOTHY A. AND SLEPIAN, PAUL: Minimal paramount matrices, 15: 197–204 (1976)

LOVASS-NAGY, V., POWERS, D. L., AND ULLMAN, F. D.: A modified ADI method for computing the "best least-squares solution" of an incompatible system $(A \times I + I \times B)x = g$, 7: 179–185 (1973)

LOVASS-NAGY, V. AND POWERS, D. L.: A note on block diagonalization of some partitioned matrices, 5: 339–346 (1972)

LOVASS-NAGY, V. AND POWERS, D. L.: On the commuting reciprocal inverse of some partitioned mces, 4: 183–190 (1971)

LOVASS-NAGY, VICTOR AND POWERS, DAVID L.: On functions of partitioned matrices with nondiagonalizable submatrices, 3: 257–262 (1970)

LOWEN, RAINER: *See* Kuhn, Dieter

LOZINSKIY, S. M.: On an estimate of the spectral radius and spectral abscissa of a matrix, 2: 117–125 (1969)

LU, TZON TZER: *See* Cheng, Sui Sun

LUBACHEVSKY, BORIS D.: The structure of the inverse to the Sylvester resultant matrix, 85: 191–202 (1987)

LUENBERGER, DAVID G.: *See* Yamada, Takeo

LUK, FRANKLIN T.: A triangular processor array for computing singular values: Special volume on parallel computing, 77: 259–273 (1986)

LUK, FRANKLIN T.: The communality problem for Stieltjes matrices, 38: 161–169 (1981)

LUK, FRANKLIN T. AND PAGANO, MARCELLO: Quadratic programming with M-matrices, 33: 15–40 (1980)

LUK, FRANKLIN T. AND QIAO, SAN ZHENG: A fast but unstable orthogonal triangularization technique for Toeplitz matrices, 88: 495–506 (1987)

LULEK, T.: *See* Mucha, M.

LUTWAK, ERWIN: On power means of positive quadratic forms, 57: 13–19 (1984)

LUTZ, D. A. AND SCHAFKE, R.: On the identification and stability of formal invariants for singular differential equations, 72: 1–46 (1985)

LYLE, BILL: A linear-algebra problem from algebraic coding theory, 22: 223–233 (1978)

LYNN, M. STUART AND TIMLAKE, WILLIAM P.: Bounds for Perron eigenvectors and subdominant eigenvalues of positive matrices, 2: 143–152 (1969)

MA, S. L.: On multipliers of polynomial addition sets, **69**: 231–238 (1985)

MA, S. L.: On rational circulants satisfying $A^m = dI + \lambda J$, **62**: 155–161 (1984)

MA, S. L.: Polynomial addition sets and polynomial digraphs, **69**: 213–230 (1985)

MA, S. L. AND WATERHOUSE, WILLIAM C.: The g-circulant solutions of $A^m = \lambda J$, **85**: 211–220 (1987)

MACK, ANGELA: *See* Zellini, Paolo

MACKENS, WOLFGANG: *See* Lorenz, Jens

MADSEN, NIEL K.: Cyclic odd-even reduction for symmetric circulant matrices, **51**: 17–35 (1983)

MAGAGNA, L.: *See* Horne, G. J.

MAGNUS, JAN R.: A representation theorem for $(\mathrm{tr}\, A^p)^{1/p}$, **95**: 127–134 (1987)

MAGURN, B. A.: *See* Vaserstein, L. N.

MAJINDAR, K. N.: Linear combinations of Hermitian and real symmetric matrices, **25**: 95–105 (1979)

MAK, T. K.: *See* Chan, N. N.

MALEK, MASSOUD: On monotonic and orthant monotonic norms, **56**: 169–175 (1984)

MALEK-SHAHMIRZADI, MASSOUD: Application of Neumann's lemma to the minimum and characteristic polynomials, **29**: 217–224 (1980)

MALEK-SHAHMIRZADI, MASSOUD: On a conjecture by D. Zh. Djokovic, **30**: 177–182 (1980)

MALZAN, JERRY: *See* Djokovic, Dragomir Zh.

MANBER, RACHEL: Graph-theoretical approach to qualitative solvability of linear systems, **48**: 457–470 (1982)

MANBER, RACHEL: *See* Klee, Victor

MANDEL, JAN: A convergence analysis of the iterative aggregation method with one parameter, **59**: 159–169 (1984)

MANDEL, JAN AND SEKERKA, BOHUSLAV: A local convergence proof for the iterative aggregation method, **51**: 163–172 (1983)

MANGASARIAN, O. L.: A stable theorem of the alternative: an extension of the Gordan theorem, **41**: 209–223 (1981)

MANGASARIAN, O. L.: Monotone splitting of matrices, **8**: 43–55 (1974)

MANGASARIAN, O. L.: Uniqueness of solution in linear programming, **25**: 151–162 (1979)

MANGASARIAN, O. L.: *See* Han, S. P.

MARCHI, EZIO AND TARAZAGA, PABLO: About (k, n) stochastic matrices, **26**: 15–30 (1979)

MARCUS, MARVIN: Rearrangement and extremal results for Hermitian matrices, **11**: 95–104 (1975)

MARCUS, MARVIN: Variations on the Cauchy-Schwarz inequality, **27**: 81–91 (1979)

MARCUS, MARVIN AND ANDRESEN, PATRICIA: The numerical radius of exterior powers, **16**: 131–151 (1977)

MARCUS, MARVIN AND FILIPPENKO, IVAN: Nondifferentiable boundary points of higher numerical range, **21**: 217–232 (1978)

MARCUS, MARVIN AND GORDON, WILLIAM ROBERT: A generalization of the unitary group, **3**: 225–247 (1970)

MARCUS, MARVIN AND HOOVER, DEAN W.: Normal and Hermitian tensor products, **9**: 1–8 (1974)

MARCUS, MARVIN AND MERRIS, RUSSELL: Antiderivations on the exterior and symmetric algebras, **5**: 13–18 (1972)

MARCUS, MARVIN AND MINC, HENRYK: An inequality for Schur functions, **5**: 19–28 (1972)

MARCUS, MARVIN AND MINC, HENRYK: Extensions of classical matrix inequalities, **1**: 421–444 (1968)

MARCUS, MARVIN AND MOORE, KENNETH: A determinant formulation of the Cauchy-Schwarz inequality, **36**: 111–127 (1981)

MARCUS, MARVIN AND MOORE, KENNETH: A subdeterminant inequality for normal matrices, **31**: 129–143 (1980)

MARCUS, MARVIN AND NEWMAN, MORRIS: Some results on unitary matrix groups, **3**: 173–178 (1970)

MARCUS, MARVIN AND PIERCE, STEPHEN: Elementary divisors of associated transformations, **2**: 21–35 (1969)

MARCUS, MARVIN AND PIERCE, STEPHEN: Extensions of the Minkowski inequality, **1**: 13–27 (1968)

MARCUS, MARVIN AND ROBINSON, HERBERT: A note on the Hodge star operator, **10**: 85–87 (1975)

MARCUS, MARVIN AND ROBINSON, HERBERT: On exterior powers of endomorphisms, **14**: 219–225 (1976)

MARCUS, MARVIN AND SANDY, MARKUS: Conditions for the generalized numerical range to be real, **71**: 219–239 (1985)

MAREK, IVO: Perron roots of a convex combination of a cone preserving map and its adjoint, **58**: 185–200 (1984)

MAREK, IVO AND ZITNY, KAREL: Two-sided spectral bounds of two irreducible linear maps, **52**: 509–523 (1983)

MARKHAM, T. L.: *See* Fiedler, M.

MARKHAM, T. L.: *See* Hung, Ching Hsiang

MARKHAM, T. L., NEUMANN, M., AND PLEMMONS, R. J.: Convergence of a direct-iterative method for large-scale least-squares problems, **69**: 155–167 (1985)

MARKHAM, THOMAS L.: A semigroup of totally nonnegative matrices, **3**: 157–164 (1970)

MARKHAM, THOMAS L.: Class G, and a unification problem, **39**: 197–204 (1981)

MARKHAM, THOMAS L.: On oscillatory matrices, **3**: 143–156 (1970)

MARKHAM, THOMAS L.: Two properties of M-matrices, **28**: 131–134 (1979)

MARKHAM, THOMAS L.: *See* Carlson, David

MARKHAM, THOMAS L.: *See* Fiedler, Miroslav

MARKHAM, THOMAS L.: *See* Hudson, Richard H.

MARKHAM, THOMAS L.: *See* Lau, Cony M.

MARKIEWICZ, AUGUSTYN: *See* Baksalary, Jerzy K.

MARKUS, A. S. AND PARILIS, E. E.: The change of the Jordan structure of a matrix under small perturbations: Translated from the Russian by Chandler Davis, **54**: 139–152 (1983)

MAROULAS, J.: A theorem on the factorization of matrix polynomials: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 311–322 (1986)

MAROULAS, J.: Factorization of matrix polynomials with multiple roots, **69**: 9–32 (1985)

MAROULAS, J.: *See* Lancaster, P.

MAROULAS, JOHN AND BARNETT, STEPHEN: Greatest common divisor of generalized polynomial and polynomial matrices, **22**: 195–210 (1978)

MARQUES DE SA, E.: Imbedding conditions for λ-matrices, **24**: 33–50 (1979)

MARQUES DE SA, E.: On the existence of matrices with constrained elements, rows and columns, **24**: 263–270 (1979)

MARQUES DE SA, E.: On the inertia of sums of Hermitian matrices, **37**: 143–159 (1981)

MARQUES DE SA, E.: *See* Cain, Bryan E.

MARSAGLIA, GEORGE AND TSAY, LIANG-HUEI: Matrices and the structure of random number sequences, **67**: 147–156 (1985)

MARSHALL, ALBERT W. AND OLKIN, INGRAM: Norms and inequalities for condition numbers. II, **2**: 167–172 (1969)

MARSHALL, ALBERT W. AND OLKIN, INGRAM: Norms and inequalities for condition numbers. III, **7**: 291–300 (1973)

MARTIGNON, L. F.: Doubly stochastic matrices with prescribed positive spectrum, **61**: 11–13 (1984)

MARTIN, D. H.: Finite criteria for conditional definiteness of quadratic forms, **39**: 9–21 (1981)

MARTIN, D. H. AND JACOBSON, D. H.: Copositive matrices and definiteness of quadratic forms subject to homogeneous linear inequality constraints, **35**: 227–258 (1981)

MARTIN, D. H., POWELL, M. J. D., AND JACOBSON, D. H.: On a decomposition of conditionally positive-semidefinite matrices, **39**: 51–59 (1981)

MARTINEZ-LEGAZ, JUAN-ENRIQUE AND SINGER, IVAN: Lexicographical separation in R^n, **90**: 147–163 (1987)

MARTINS, M. MADALENA: On the convergence of the modified overrelaxation method, **81**: 55–73 (1986)

MASSER, D. W. AND NEUMANN, M.: On the square roots of strictly quasi-accretive complex matrices, **28**: 135–140 (1979)

MATHAR, RUDOLF: The best Euclidian fit to a given distance matrix in prescribed dimensions, **67**: 1–6 (1985)

MATHEW, THOMAS: Hermitian and nonnegativity preserving subspaces, **82**: 225–235 (1986)

MATTHEIJ, R. M. M.: Accurate estimates of solutions of second order recursions, **12**: 29–54 (1975)

MATTHEIJ, R. M. M. AND SMOOKE, M. D.: Estimates for the inverse of tridiagonal matrices arising in boundary value problems, **73**: 33–57 (1986)

MATTHEIJ, R. M. M. AND SODERLIND, G.: On inhomogeneous eigenvalue problems. I, **88**: 507–531 (1987)

MATTIS, MICHAEL P. AND HOCHSTADT, HARRY: On the construction of band matrices from spectral data, **38**: 109–119 (1981)

MAURER, STEPHEN B.: A maximum-rank minimum-term-rank theorem for matroids, **10**: 129–137 (1975)

MAXWELL, GEORGE: On double commutators, **4**: 283–284 (1971)

MAYBEE, JOHN S.: Combinatorially symmetric matrices, **8**: 529–537 (1974)

MAYER, GUNTER: On the asymptotic convergence factor of the total step method in interval computation, **85**: 153–164 (1987)

MAYER, GUNTER: On the convergence of powers of interval matrices, **58**: 201–216 (1984)

MAYER, GUNTER: On the convergence of the Neumann series in interval analysis, **65**: 63–70 (1985)

MCALLISTER, D. F., STEWART, G. W., AND STEWART, W. J.: On a Rayleigh-Ritz refinement technique for nearly uncoupled stochastic matrices, **60**: 1–25 (1984)

MCASEY, MICHAEL J. AND MUHLY, PAUL S.: On projective equivalence of invariant subspace lattices, **43**: 167–179 (1982)

MCCONNEL, ROBERT M.: *See* Beard, Jacob T. B., Jr.

MCCONNEL, ROBERT M.: *See* Cline, Randall E.

MCCORMICK, S. F.: *See* Longsine, D. E.

MCCORMICK, S. F. AND NOE, T.: Simultaneous iteration for the matrix eigenvalue problem, **16**: 43–56 (1977)

MCDONALD, B. R.: Similarity of matrices over Artinian principal ideal rings, **21**: 153–162 (1978)

MCDONALD, JOHN N.: On some zero configurations associated with the van der Waerden conjecture, **32**: 137–155 (1980)

MCENTEGGERT, P.: *See* Thompson, R. C.

MCFALL, J. D.: On elementary divisors of the tensor product of two matrices, **33**: 67–86 (1980)

MCINTOSH, ALAN: *See* Bhatia, Rajendra

MCKAY, B. D.: *See* Godsil, C. D.

MCKAY, BRENDAN D.: The expected eigenvalue distribution of a large regular graph, **40**: 203–216 (1981)

MCKAY, JAMES H. AND WANG, STUART SUI SHENG: On a theorem of Brualdi and Newman, **92**: 39–43 (1987)

MCMATH, JOHN S., SIMS, S. E., AND HALLUM, C. R.: On the properties of a matrix valued derivative utilizing the Moore- Penrose inverse, **18**: 281–291 (1977)

MCQUILLAN, DONALD L.: *See* Laffey, Thomas J.

MEEK, D. S.: A new class of matrices with positive inverses, **15**: 253–260 (1976)

MEEK, D. S.: Comparison of infinity norms of matrix inverses, **96**: 149–156 (1987)

MEEK, D. S.: The inverses of Toeplitz band matrices, **49**: 117–129 (1983)

MEEK, D. S.: *See* Hoskins, W. D.

MEES, A. I. AND ATHERTON, D. P.: Domains containing the field of values of a matrix, **26**: 289–296 (1979)

MEHRMANN, VOLKER: On a generalized Fan inequality, **58**: 235–245 (1984)

MEHRMANN, VOLKER: On classes of matrices containing *M*-matrices and Hermitian positive semidefinite matrices, **58**: 217–234 (1984)

MEHRMANN, VOLKER: On the *LU* decomposition of *V*-matrices, **61**: 175–186 (1984)

MEHRMANN, VOLKER: *See* Hershkowitz, Daniel

MEINARDUS, G.: *See* Hadeler, K. P.

MELKMAN, A. A.: *See* Friedland, S.

MELTER, ROBERT A. AND RUDEANU, SERGIU: Linear equations and interpolation in Boolean algebra, **57**: 31–40 (1984)

MENA, R. A.: On discriminant-like polynomials, **75**: 193–201 (1986)

MENA, R. A.: *See* Bridges, W. G.

MENDELSOHN, N. S.: An application of matrix theory to a problem in universal algebra, **1**: 471–478 (1968)

MENON, M. V. AND SCHNEIDER, HANS: The spectrum of a nonlinear operator associated with a matrix, **2**: 321–334 (1969)

MERIKOSKI, JORMA KAARLO: On operator norms of submatrices, **36**: 173–183 (1981)

MERIKOSKI, JORMA KAARLO: On the trace and the sum of elements of a matrix, **60**: 177–185 (1984)

MERIKOSKI, JORMA KAARLO: *See* Kankaanpaa, Hilkka

MERIKOSKI, JORMA KAARLO, STYAN, GEORGE P. H., AND WOLKOWICZ, HENRY: Bounds for ratios of eigenvalues using traces, **55**: 105–124 (1983)

MERIKOSKI, JORMA KAARLO AND WOLKOWICZ,

HENRY: Improving eigenvalue bounds using extra bounds, **68**: 93–113 (1985)

MERRIS, RUSSELL: A generalization of the associated transformation, **4**: 393–406 (1971)

MERRIS, RUSSELL: Applications of spherical functions in multilinear algebra, **20**: 77–86 (1978)

MERRIS, RUSSELL: Induced bases of symmetry classes of tensors, **39**: 103–110 (1981)

MERRIS, RUSSELL: Manifestations of Polya's counting theorem, **32**: 209–232 (1980)

MERRIS, RUSSELL: Nonzero decomposable symmetrized tensors, **17**: 287–292 (1977)

MERRIS, RUSSELL: Pattern inventories associated with symmetry classes of tensors, **29**: 225–230 (1980)

MERRIS, RUSSELL: Two problems involving Schur functions, **10**: 155–162 (1975)

MERRIS, RUSSELL: *See* Fiedler, Miroslav

MERRIS, RUSSELL: *See* Grone, Robert

MERRIS, RUSSELL: *See* Ishaq, M.

MERRIS, RUSSELL: *See* Marcus, Marvin

MERRIS, RUSSELL, REBMAN, KENNETH R., AND WATKINS, WILLIAM: Permanental polynomials of graphs, **38**: 273–288 (1981)

MERRIS, RUSSELL AND WATKINS, WILLIAM: An invariant theory approach to graph enumeration, **61**: 277–285 (1984)

MERRIS, RUSSELL AND WATKINS, WILLIAM: Elementary divisors of induced transformations on symmetry classes of tensors, **38**: 17–26 (1981)

MERRIS, RUSSELL AND WATKINS, WILLIAM: Inequalities and identities for generalized matrix functions, **64**: 223–242 (1985)

METELMANN, KURT: Ein Kriterium fur den Nachweis der Totalnichtnegativitat von Bandmatrizen, **7**: 163–171 (1973)

MEYER, C. D., JR.: *See* Funderlic, R. E.

MEYER, C. D., JR. AND STADELMAIER, M. W.: Singular M-matrices and inverse positivity, **22**: 139–156 (1978)

MEYER, CARL D., JR.: An alternative expression for the mean first passage matrix, **22**: 41–47 (1978)

MEYER, CARL D., JR.: Representations for (1)- and (1,2)-inverses for partitioned matrices, **4**: 221–232 (1971)

MEYER, CARL D., JR.: Some remarks on *EP*, matrices, and generalized inverses, **3**: 275–278 (1970)

MEYER, CARL D., JR.: The Moore-Penrose inverse of a bordered matrix, **5**: 375–382 (1972)

MEYER, CARL D., JR.: *See* Campbell, Stephen L.

MEYER, CARL D., JR.: *See* Stadelmaier, Michael W.

MEYER, HANS-BERNHARD: Matrix Riccati solutions, **20**: 131–146 (1978)

MICALI, ARTIBANO, CAMPOS, TANIA M. M. , COSTA E SILVA, MARIA C., AND FERREIRA, SILVIA M. M.: Derivations dans les algebres gametiques. II: Derivations in gametic algebras. II, **64**: 175–181 (1985)

MICCHELLI, C. A.: *See* Cavaretta, A. S., Jr.

MICCHELLI, CHARLES A.: *See* Dahmen, Wolfgang

MICCHELLI, CHARLES A.: *See* Friedland, Shmuel

MICCHELLI, CHARLES A.: *See* Goodman, T. N. T.

MICCHELLI, CHARLES A. AND WILLOUGHBY, R. A.: On functions which preserve the class of Stieltjes matrices, **23**: 141–156 (1979)

MIHALYFFY, L.: An alternative representation of the generalized inverse of partitioned matrices, **4**: 95–100 (1971)

MILASZEWICZ, J. P.: Improving Jacobi and Gauss-Seidel iterations, **93**: 161–170 (1987)

MILASZEWICZ, J. P.: On modified Jacobi linear operators, **51**: 127–136 (1983)

MILLER, VALERIE A. AND NEUMANN, MICHAEL: Successive overrelaxation methods for solving the rank deficient linear least squares problem, **88**: 533–557 (1987)

MINC, HENRYK: Linear transformations on nonnegative matrices, **9**: 149–153 (1974)

MINC, HENRYK: Nearly decomposable matrices, **5**: 181–187 (1972)

MINC, HENRYK: On a conjecture of R. A. Brualdi, **94**: 61–66 (1987)

MINC, HENRYK: On a conjecture of R. F. Scott (1881), **28**: 141–153 (1979)

MINC, HENRYK: Permanental compounds and permanents of (0,1)-circulants, **86**: 11–42 (1987)

MINC, HENRYK: Recurrence formulas for per-

manents of (0,1)-circulants, **71**: 241–265 (1985)

MINC, HENRYK: *See* Marcus, Marvin

MIRANKER, W.: *See* Chazan, D.

MIRANKER, W. L. AND CHERN, I.-L.: Dichotomy and conjugate gradients in the stiff initial value problem, **36**: 57–77 (1981)

MIRANKER, W. L. AND PAN, V. YA.: Methods of aggregation, **29**: 231–257 (1980)

MIRANKER, WILLARD L.: *See* Chatelin, Francoise

MIRMAN, BORIS: Anti-eigenvalues: method of estimation and calculation, **49**: 247–255 (1983)

MIRSKY, L.: *See* Smith, R. A.

MIRSKY, LEON: Leon Mirsky, 1918–1983, **61**: 1–10 (1984)

MISSIRLIS, NIKOLAOS M.: A parallel iterative system solver, **65**: 25–44 (1985)

MITRA, SUJIT KUMAR: On group inverses and the sharp order, **92**: 17–37 (1987)

MITRA, SUJIT KUMAR: Simultaneous diagonalization of rectangular matrices, **47**: 139–150 (1982)

MITRA, SUJIT KUMAR: The matrix equations $AX = C$, $XB = D$, **59**: 171–181 (1984)

MITRA, SUJIT KUMAR: The minus partial order and the shorted matrix, **83**: 1–27 (1986)

MITRA, SUJIT KUMAR AND ODELL, PATRICK L.: On parallel summability of matrices, **74**: 239–255 (1986)

MITRA, SUJIT KUMAR AND PURI, MADAN L.: Shorted matrices—an extended concept and some applications, **42**: 57–79 (1982)

MITRA, SUJIT KUMAR AND PURI, MADAN L.: Shorted operators and generalized inverses of matrices, **25**: 45–56 (1979)

MITRA, SUJIT KUMAR AND RAO, C. RADHAKRISHNA: Projections under seminorms and generalized Moore Penrose inverses, **9**: 155–167 (1974)

MITRA, SUJIT KUMAR AND TRAPP, GEORGE E.: On hybrid addition of matrices, **10**: 19–35 (1975)

MITTER, S. K.: *See* Djaferis, T. E.

MIZORI-OBLAK, PAVLA AND VIDAV, IVAN: On entire matrix-valued functions, **22**: 25–31 (1978)

MLYNARSKI, MAX: A note on matricial minimality, **17**: 133–138 (1977)

MLYNARSKI, MAX: *See* Deutsch, Emeric

MOBERT, T. : *See* Jongen, H. Th.

MODI, J. J.: *See* Davies, Roy O.

MOHAN, S. R.: On the simplex method and a class of linear complementarity problems, **14**: 1–9 (1976)

MOHAN, S. R.: *See* Ramamurthy, K. G.

MOHAN, S. R., NEUMANN, M., AND RAMAMURTHY, K. G.: Nonnegativity of principal minors of generalized inverses of M-matrices, **58**: 247–259 (1984)

MOHAR, BOJAN: The spectrum of an infinite graph, **48**: 245–256 (1982)

MOHAR, BOJAN AND OMLADIC, MATJAZ: Divisors and the spectrum of infinite graphs, **91**: 99–106 (1987)

MOLER, CLEVE: *See* Golub, Gene H.

MOND, B.: *See* Craven, B. D.

MOND, BERTRAM: Generalized inverse extensions of matrix inequalities, **2**: 393–399 (1969)

MOND, BERTRAM AND HANSON, MORGAN A.: A complex transposition theorem with applications to complex programming, **2**: 49–56 (1969)

MOND, BERTRAM AND HANSON, MORGAN A.: Some generalizations and applications of a complex transposition theorem, **2**: 401–411 (1969)

MOON, YIU SANG: *See* Crawford, C. R.

MOORE, DAVID S.: *See* Gleser, Leon J.

MOORE, JOHN B.: *See* Anderson, Brian D. O.

MOORE, KENNETH: Decomposable bilinear numerical radii, **42**: 253–260 (1982)

MOORE, KENNETH: *See* Marcus, Marvin

MOORE, MICHAEL H.: An improved upper bound in the maximum dispersal problem, **8**: 471–476 (1974)

MOORE, MICHAEL H.: Vector packing in finite dimensional vector spaces, **8**: 213–224 (1974)

MOORS, J. J. A.: Minimizing a norm of a matrix, **2**: 447–449 (1969)

MORE, J. AND RHEINBOLDT, W.: On P- and S-functions and related classes of n-dimensional nonlinear mappings, **6**: 45–68 (1973)

MOREL, PAUL: Des algorithmes pour le probleme inverse des valeurs propres, **13**: 251–273 (1976)

MORF, M.: *See* Friedlander, B.

MORF, MARTIN: *See* Genin, Yves

MORF, MARTIN: *See* Nehorai, Arye

MORGAN, D.: *See* Kailath, T.

MORGAN, FRANK: The exterior algebra $\Lambda^k \mathbf{R}^n$ and area minimization, **66**: 1–28 (1985)

MORLEY, T. D.: *See* Anderson, W. N., Jr.

MORLEY, T. D.: *See* Layton, W.

MOUSOURIS, NICK: *See* Porter, A. Duane

MOYLAN, PETER J.: Matrices with positive principal minors, **17**: 53–58 (1977)

MUCHA, M. AND LULEK, T.: Permutational symmetry of Clebsch-Gordan coefficients for the metacyclic groups, **51**: 49–71 (1983)

MUHLBACH, G. AND GASCA, M.: A generalization of Sylvester's identity on determinants and some applications, **66**: 221–234 (1985)

MUHLY, PAUL S.: *See* McAsey, Michael J.

MUIRHEAD, ROBB J. AND LEUNG, PUI LAM: Estimating functions of canonical correlation coefficients, **70**: 173–183 (1985)

MUKHERJEA, KALYAN K.: *See* Bhatia, Rajendra

MULLEN, GARY L.: Equivalence classes of matrices over finite fields, **27**: 61–68 (1979)

MULLER, KARL HANS: Uber den Spektralradius verallgemeinerter Relaxationsverfahren, **6**: 263–268 (1973)

MULLER, VLADIMIR: On the spectrum of an infinite graph, **93**: 187–189 (1987)

MULLER-FUNK, U., PUKELSHEIM, F., AND WITTING, H.: On the duality between locally optimal tests and optimal experimental designs, **67**: 19–34 (1985)

MUONEKE, N'EKWUNIFE: On the stochastic powers of nonnegative reducible matrices, **90**: 57–63 (1987)

MUROTA, KAZUO: *LU*-decomposition of a matrix with entries of different kinds, **49**: 275–283 (1983)

MURPHY, IAN S.: A note on the product of complementary principal minors of a positive definite matrix, **44**: 169–172 (1982)

MURRAY, WALTER: *See* Gill, Philip E.

MURTY, KATTA G.: On the number of solutions to the complementarity problem and spanning properties of complementary cones, **5**: 65–108 (1972)

NAJFELD, IGOR, VITALE, RICHARD A., AND DAVIS, PHILIP J.: Minkowski iteration of sets, **29**: 259–291 (1980)

NAJMAN, BRANKO: *See* Langer, Heinz

NAKAMURA, YOSHIHIRO: Any Hermitian matrix is a linear combination of four projections, **61**: 133–139 (1984)

NANDA, T.: *See* Deift, P.

NARAYANA RAO, M. L. AND SATYANARAYANA, K.: On Sherk's plane of order 27, **74**: 1–9 (1986)

NARAYANAN, H.: On the decomposition of vector spaces, **79**: 61–98 (1986)

NARCOWICH, F. J. AND WARD, J. D.: Toeplitz-Hausdorff systems, **62**: 183–193 (1984)

NATTERER, FRANK: A generalized spline method for singular boundary value problems of ordinary differential equations, **7**: 189–216 (1973)

NAZARETH, LARRY: Numerical behavior of LP algorithms based upon the decomposition principle, **57**: 181–189 (1984)

NAZARETH, LARRY: On the convergence of the cyclic Jacobi method, **12**: 151–164 (1975)

NAZARETH, LARRY: Unified approach to unconstrained minimization via basic matrix factorizations, **17**: 197–232 (1977)

NEF, W.: *See* Bieri, H.

NEHORAI, ARYE AND MORF, MARTIN: A unified derivation for fast estimation algorithms by the conjugate direction method, **72**: 119–143 (1985)

NEL, D. G.: A matrix derivation of the asymptotic covariance matrix of sample correlation coefficients, **67**: 137–145 (1985)

NEUBERGER, J. W.: Finite-dimensional potential theory applied to numerical analysis of linear systems, **35**: 193–202 (1981)

NEUDECKER, H.: On the dispersion matrix of a matrix quadratic form connecte with the noncentral Wishart distribution, **70**: 257–262 (1985)

NEUDECKER, HEINZ AND WANSBEEK, TOM: Fourth-order properties of normally distributed random matrices, **97**: 13–21 (1987)

NEUMAIER, A.: Further results on linear interval equations, **87**: 155–179 (1987)

NEUMAIER, A.: On the comparison of *H*-matrices with *M*-matrices, **83**: 135–141 (1986)

NEUMAIER, A.: The second largest eigenvalue of a tree, **46**: 9–25 (1982)

NEUMAIER, A. AND VARGA, R. S.: Exact convergence and divergence domains for the symmetric successive overrelaxation iterative (SSOR) method applied to *H*-matrices, **58**: 261–272 (1984)

NEUMAIER, ARNOLD: New techniques for the analysis of linear interval equations, **58**: 273–325 (1984)

NEUMANN, M.: A combined direct-iterative approach for solving large scale singular and rectangular consistent systems of linear equations, **34**: 85–101 (1980)

NEUMANN, M.: A note on generalizations of strict diagonal dominance for real matrices, **26**: 3–14 (1979)

NEUMANN, M.: Some applications of partial orderings to iterative methods for rectangular linear systems, **19**: 95–116 (1978)

NEUMANN, M.: Subproper splitting for rectangular matrices, **14**: 41–51 (1976)

NEUMANN, M.: The Kahan S.O.R. convergence bound for nonsingular and irreducible M-matrices, **39**: 205–222 (1981)

NEUMANN, M.: *See* Markham, T. L.

NEUMANN, M.: *See* Masser, D. W.

NEUMANN, M.: *See* Mohan, S. R.

NEUMANN, M. AND PLEMMONS, R. J.: Convergence of parallel multisplitting iterative methods for *M*-matrices, **88**: 559–573 (1987)

NEUMANN, M. AND PLEMMONS, R. J.: Generalized inverse-positivity and splittings of *M*-matrices, **23**: 21–35 (1979)

NEUMANN, MICHAEL: *See* Berman, Abraham

NEUMANN, MICHAEL: *See* Buoni, John J.

NEUMANN, MICHAEL: *See* Deutsch, Emeric

NEUMANN, MICHAEL: *See* Fiedler, Miroslav

NEUMANN, MICHAEL: *See* Lewin, Mordechai

NEUMANN, MICHAEL: *See* Miller, Valerie A.

NEUMANN, MICHAEL, POOLE, GEORGE D., AND WERNER, HANS-JOACHIM: More on generalizations of matrix monotonicity, **48**: 413–435 (1982)

NEWMAN, MORRIS: An identity of A. Ostrowski, **1**: 317–319 (1968)

NEWMAN, MORRIS: Gershgorin revisited, **30**: 247–249 (1980)

NEWMAN, MORRIS: Lyapunov revisited, **52**: 525–528 (1983)

NEWMAN, MORRIS: *See* Marcus, Marvin

NG, C. T.: The equation $F(x)+M(x)G(1/x)=0$ and homogeneous biadditive forms, **93**: 255–279 (1987)

NG, C. T.: *See* Aczel, J.

NG, C. T.: *See* Chung, J. K.

NG, DINA: An effective criterion for congruence of real symmetric matrix pairs: Collection of articles dedicated to Olga Taussky Todd, **13**: 11–18 (1976)

NG, ESMOND: *See* George, Alan

NGUYEN-QUANG-DO THONG: Structure du groupe des similitudes, **12**: 241–246 (1975)

NGUYEN, TRUC T. AND SAMPSON, ALLAN R.: The geometry of certain fixed marginal probability distributions, **70**: 73–87 (1985)

NGUYEN, V. HIEN AND STRODIOT, J.-J.: Some properties of a uniformly linearly independent sequence of subspaces, **25**: 115–127 (1979)

NICHOLSON, D. W.: Eigenvalue bounds for $AB+BA$, with A, B positive definite matrices, **24**: 173–183 (1979)

NICHOLSON, VICTOR A.: Matrices with permanent equal to one, **12**: 185–188 (1975)

NICKEL, KARL: Die Auflosbarkeit linearer Kreisscheiben- und Intervall-Gleichungssysteme: (The solvability of linear systems of disc and interval equations), **44**: 19–40 (1982)

NICOLAIDES, R. A.: *See* Gunzburger, Max D.

NIELSEN, KLAUS: On bireflectionality and trireflectionality of orthogonal groups, **94**: 197–208 (1987)

NIELSEN, KLAUS: *See* Knuppel, Frieder

NIETHAMMER, W.: *See* Varga, R. S.

NIETHAMMER, W.: *See* Wild, P.

NIETHAMMER, W., DE PILLIS, J., AND VARGA, R. S.: Convergence of block iterative methods applied to sparse least-squares problems, **58**: 327–341 (1984)

NISHIO, KATSUYOSHI: The structure of a real linear combination of two projections, **66**: 169–176 (1985)

NOE, T.: *See* McCormick, S. F.

NOLTE, WOLFGANG: *See* Ellers, Erich W.

NOMAKUCHI, KENTARO: On the characterization of generalized inverses by bordered matrices, **33**: 1–8 (1980)

NORDIO, MARCELO: *See* Puschmann, Heinrich

NOUR-OMID, B.: *See* Parlett, B. N.

NOWOSAD, PEDRO AND TOVAR, RAUL: Spectral inequalities and G-functions, **31**: 179–197 (1980)

NUSSBAUM, ROGER D.: Convexity and log convexity for the spectral radius, **73**: 59–122 (1986)

NWOKAH, OSITA D. I.: Estimates for the inverse of a matrix and bounds for eigenvalues, **22**: 283–291 (1978)

O'BRIEN, RICHARD C.: On extreme matrices and extreme vectors of cones in R^n, **12**: 77–79 (1975)

ODELL, PATRICK L.: *See* Mitra, Sujit Kumar

ODLYZKO, A. M.: *See* Landau, H. J.

OKOH, FRANK: Applications of linear functionals to Kronecker modules. I, II, **76**: 165–188, 189–204 (1986)

OKOH, FRANK: Direct sums and direct products of canonical pencils of matrices, **25**: 1–26 (1979)

OKOH, FRANK: *See* Fixman, Uri

OKUBO, K.: Holder-type norm inequalities for Schur products of matrices, **91**: 13–28 (1987)

O'LEARY, DIANNE P.: The block conjugate gradient algorithm and related methods, **29**: 293–322 (1980)

O'LEARY, DIANNE P. AND STEWART, G. W.: Assignment and scheduling in parallel matrix factorization: Special volume on parallel computing, **77**: 275–299 (1986)

O'LEARY, DIANNE PROST: A generalized conjugate gradient algorithm for solving a class of quadratic programming problems, **34**: 371–399 (1980)

OLESKY, D. D. : *See* Ahac, Alan A.

OLESKY, D. D.: *See* Johnson, Charles R.

OLESKY, D. D.: *See* Johnston, R. L.

OLESKY, D. D.: *See* Kovarik, Z. V.

OLESKY, D. D. AND VAN DEN DRIESSCHE, P.: Monotone positive stable matrices, **48**: 381–401 (1982)

OLKIN, I.: *See* Anderson, T. W.

OLKIN, I. AND PUKELSHEIM, F.: The distance between two random vectors with given dispersion matrices, **48**: 257–263 (1982)

OLKIN, INGRAM: An inequality for a sum of forms, **52**: 529–532 (1983)

OLKIN, INGRAM: Estimating a Cholesky decomposition, **67**: 201–205 (1985)

OLKIN, INGRAM: Matrix extensions of Liouville-Dirichlet-type integrals, **28**: 155–160 (1979)

OLKIN, INGRAM: *See* Marshall, Albert W.

OLKIN, INGRAM AND SAMPSON, ALLAN R.: Jacobians of matrix transformations and induced functional equations, **5**: 257–276 (1972)

OMLADIC, MATJAZ: *See* Mohar, Bojan

ONG, HOCK: Linear transformations on matrices: the invariance of generalized permutation matrices. III, **15**: 119–151 (1976)

ONG, HOCK: *See* Lim, M. H.

ONG, SING CHEONG: On the Schur multiplier norm of matrices, **56**: 45–55 (1984)

ONG, SING CHEONG: Remarks on invariant subspaces for finite-dimensional operators, **42**: 99–101 (1982)

ONG, SING-CHEONG: What kind of operators have few invariant subspaces?, **95**: 181–185 (1987)

ONISHI, HIRONORI: *See* Appelgate, Harry

OPFER, GERHARDLENN: Richardson's iteration for nonsymmetric matrices, **58**: 343–361 (1984)

O'REILLY, MICHAEL F.: Matrix algebras with direct product, **16**: 19–24 (1977)

ORTEGA, JAMES M. AND PLEMMONS, ROBERT J.: Extensions of the Ostrowski-Reich theorem for SOR iterations, **28**: 177–191 (1979)

OST, FRIEDEMANN: *See* Karlin, Samuel

OSTROWSKI, A. M.: On subdominant roots of nonnegative matrices, **8**: 179–184 (1974)

OSTROWSKI, ALEXANDER: A new proof of Haynsworth's quotient formula for Schur complements, **4**: 389–392 (1971)

OSTROWSKI, ALEXANDER M.: To Alexander M. Ostrowski on his ninetieth birthday, **52**: xi-xiv (1983)

OSTROWSKI, ALEXANDER M.: *See* Haynsworth, Emilie V.

OUELLETTE, DIANE VALERIE: Schur complements and statistics, **36**: 187–295 (1981)

OXENRIDER, CLINTON J. AND HILL, RICHARD D.: On the matrix reorderings Γ and Ψ, **69**: 205–212 (1985)

Ozguler, A. Bulent: Polynomial characterizations of (H,F)-invariant subspaces with applications, **73**: 1–31 (1986)

Ozguler, A. Bulent: *See* Khargonekar, Pramod P.

Paardekooper, M. H. C.: *See* Elsner, L.

Padberg, Manfred W.: Almost integral polyhedra related to certain combinatorial optimization problems, **15**: 69–88 (1976)

Pagano, Marcello: *See* Luk, Franklin T.

Paige, C. C.: Accuracy and effectiveness of the Lanczos algorithm for the symmetric eigenproblem, **34**: 235–258 (1980)

Paige, C. C.: Eigenvalues of perturbed Hermitian matrices, **8**: 1–10 (1974)

Paige, C. C.: The general linear model and the generalized singular value decomposition, **70**: 269–284 (1985)

Paige, C. C. and Van Dooren, P.: On the quadratic convergence of Kogbetliantz's algorithm for computing the singular value decomposition: Special volume on parallel computing, **77**: 301–313 (1986)

Paige, Chris and Van Loan, Charles: A Schur decomposition for Hamiltonian matrices, **41**: 11–32 (1981)

Pall, Gordon: Partitioning by means of maximal isotropic subspaces, **5**: 173–180 (1972)

Palmer, Theodore W.: *See* Daniel, James W.

Pan, C.-T.: *See* Alexander, S. T.

Pan, V. Ya.: *See* Miranker, W. L.

Pang, Jong Shi: A new characterization of real H-matrices with positive diagonals, **25**: 163–167 (1979)

Pang, Jong Shi: Hidden Z-matrices with positive principal minors, **23**: 201–215 (1979)

Pang, Jong Shi: On cone orderings and the linear complementarity problem, **22**: 267–281 (1978)

Pang, Jong Shi: *See* Kaneko, Ikuyo

Pao, C. V.: A further remark on the logarithmic derivatives of a square matrix, **7**: 275–278 (1973)

Pao, C. V.: Logarithmic derivates of a square matrix, **6**: 159–164 (1973)

Parameswaran, M. R.: Relations between certain matrix products similar to commutativity, **10**: 219–224 (1975)

Parilis, E. E.: *See* Markus, A. S.

Parker, W. A.: *See* Curtis, W. D.

Parlett, B. N.: A new look at the Lanczos algorithm for solving symmetric systems of linear equations, **29**: 323–346 (1980)

Parlett, B. N.: A recurrence among the elements of functions of triangular matrices, **14**: 117–121 (1976)

Parlett, B. N.: Winograd's Fourier transform via circulants, **45**: 137–155 (1982)

Parlett, B. N. and Landis, T. L.: Methods for scaling to doubly stochastic form, **48**: 53–79 (1982)

Parlett, B. N. and Nour-Omid, B.: The use of a refined error bound when updating eigenvalues of tridiagonals, **68**: 179–219 (1985)

Parlett, Beresford: Normal Hessenberg and moment matrices, **6**: 37–43 (1973)

Parlett, Beresford N. and Saad, Ycef: Complex shift and invert strategies for real matrices, **88**: 575–595 (1987)

Parsons, T. D.: A combinatorial approach to convex quadratic programming, **3**: 359–378 (1970)

Parter, Seymour V.: On the distribution of the singular values of Toeplitz matrices, **80**: 115–130 (1986)

Partington, J. R.: Hermitian operators for absolute norms and absolute direct sums, **23**: 275–280 (1979)

Pate, T. H.: Permutation-operator inequalities on certain symmetry classes of tensors, **45**: 1–12 (1982)

Pate, Thomas H.: An inequality involving permanents of certain direct products, **57**: 147–155 (1984)

Pate, Thomas H.: Decomposability of symmetric multilinear functions, **65**: 71–81 (1985)

Pate, Thomas H.: Generalizing the Fischer inequality, **92**: 1–15 (1987)

Pate, Thomas H.: Lower bounds for the norm of the symmetric product, **14**: 285–292 (1976)

Patel, Rajnikant and Toda, Mitsuhiko: Trace inequalities involving Hermitian matrices, **23**: 13–20 (1979)

Pattabhiraman, M. V.: *See* Lancaster, P.

Paul, Michael E.: *See* Houck, David J.

Paulsen, Vern I.: *See* Loebl, Richard I.

PAVUR, R. J. AND LEWIS, T. O.: The role of powers of matrices in determining the distribution oquadratic forms involving the complex normal distribution, **76**: 71–84 (1986)

PAZ, A.: Word functions of pseudo-Markov chains, **10**: 1–5 (1975)

PEARL, MARTIN H.: Generalized inverses of matrices with entries taken from an arbitrary field, **1**: 571–587 (1968)

PEDERSON, ROGER N.: *See* Hager, William W.

PERELOMOV, A. M.: *See* Calogero, F.

PERESI, LUIZ A.: On baric algebras with prescribed automorphisms, **78**: 163–185 (1986)

PERFECT, HAZEL: *See* Burkill, H.

PETTET, MARTIN R.: Near-fields and linear transformations of finite fields, **48**: 443–456 (1982)

PHADKE, S. V. AND THAKARE, N. K.: Generalized inverses and operator equations, **23**: 191–199 (1979)

PHADKE, S. V. AND THAKARE, N. K.: On a conjecture of S. V. Phadke and N. K. Thakare: "Generalized inverses and operator equations" (Linear Algebra Appl. 23 (1979), 191–199; MR 80b:47017), **32**: 113–114 (1980)

PHAM DINH TAO: Convergence of a subgradient method for computing the bound norm of matrices, **62**: 163–182 (1984)

PIERCE, STEPHEN: *See* Ballantine, C. S.

PIERCE, STEPHEN: *See* Carlson, David

PIERCE, STEPHEN: *See* Choudhury, Dipa

PIERCE, STEPHEN: *See* Marcus, Marvin

PIFF, M. J.: Inverses of banded and k-Hessenberg matrices, **85**: 9–15 (1987)

PINKUS, A.: Some extremal problems for strictly totally positive matrices, **64**: 141–156 (1985)

PINKUS, A.: *See* de Boor, C.

PINKUS, ALLAN: Matrices and n-widths, **27**: 245–278 (1979)

PINKUS, ALLAN: *See* Karlin, Samuel

PINKUS, ALLAN: *See* de Boor, Carl

PITTELKOW, UWE: *See* Runckel, Hans-J.

PITTENGER, ARTHUR O.: *See* Houck, David J.

PIZARRO, ANTONIO: Similarity classes of 3×3 matrices over a discrete valuation ring, **54**: 29–51 (1983)

PLEMMONS, R. J.: M-matrices leading to semiconvergent splittings, **15**: 243–252 (1976)

PLEMMONS, R. J.: M-matrix characterizations. I. Nonsingular M-matrices, **18**: 175–188 (1977)

PLEMMONS, R. J.: Graphs and nonnegative matrices, **5**: 283–292 (1972)

PLEMMONS, R. J.: *See* Alexander, S. T.

PLEMMONS, R. J.: *See* Berman, A.

PLEMMONS, R. J.: *See* Cline, R. E.

PLEMMONS, R. J.: *See* Funderlic, R. E.

PLEMMONS, R. J.: *See* Markham, T. L.

PLEMMONS, R. J.: *See* Neumann, M.

PLEMMONS, ROBERT J.: *See* Golub, Gene H.

PLEMMONS, ROBERT J.: *See* Ortega, James M.

PLESS, VERA AND RUSHANAN, JOSEPH J.: Triadic codes, **98**: 415–433 (1988)

POKRZYWA, ANDRZEJ: On continuity of spectra in norm ideals, **69**: 121–130 (1985)

POKRZYWA, ANDRZEJ: On perturbations and the equivalence orbit of a matrix pencil, **82**: 99–121 (1986)

POLLOCK, D. S. G.: Tensor products and matrix differential calculus, **67**: 169–193 (1985)

POLMAN, BEN: Incomplete blockwise factorizations of (block) H-matrices, **90**: 119–132 (1987)

POLMAN, BEN: *See* Axelsson, Owe

POLMAN, BEN: *See* Ermers, Ruud

POLUIKIS, JOHN A. AND HILL, RICHARD D.: Completely positive and Hermitian-preserving linear transformations, **35**: 1–10 (1981)

POLYRAKIS, IOANNIS A.: Cones locally isomorphic to the positive cone of $l_1(\Gamma)$: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 323–334 (1986)

POMMER, CHRISTIAN AND KLIEM, WOLFHARD: Simultaneously normalizable matrices, **94**: 113–125 (1987)

PONSTEIN, J.: A matrix minimization problem involving ranks, **92**: 81–106 (1987)

POOLE, G. D. AND BARKER, G. P.: MP matrices, **26**: 165–174 (1979)

POOLE, GEORGE D.: *See* Campbell, Stephen L.

POOLE, GEORGE D.: *See* Neumann, Michael

POOLE, GEORGE D.: *See* Stadelmaier, Michael W.

POOLLA, KAMESHWAR R.: *See* Khargonekar, Pramod P.

POON, YIU TUNG: *See* Au-Yeung, Yik Hoi

PORSCHING, T. A.: *See* Frey, A. E.

PORTER, A. DUANE: Solvability of the matrix equation $AX = B$, **13**: 177–184 (1976)

PORTER, A. DUANE: Some partitions of a Hermitian matrix, **12**: 231–239 (1975)

PORTER, A. DUANE AND MOUSOURIS, NICK: Exponential sums and rectangular partitions, **29**: 347–355 (1980)

PORTER, A. DUANE AND MOUSOURIS, NICK: Ranked solutions of $AXC = B$ and $AX = B$, **24**: 217–224 (1979)

POWELL, M. J. D.: On error growth in the Bartels-Golub and Fletcher-Matthews algorithms for updating matrix factorizations, **88**: 597–621 (1987)

POWELL, M. J. D.: *See* Martin, D. H.

POWER, S. C.: Finite rank multivariable Hankel forms, **48**: 237–244 (1982)

POWERS, D. L.: *See* Lovass-Nagy, V.

POWERS, DAVID L.: A block Gershgorin theorem: Collection of articles dedicated to Olga Taussky Todd, **13**: 45–52 (1976)

POWERS, DAVID L.: *See* Lovass-Nagy, Victor

POWERS, DAVID L. AND SULAIMAN, MOHAMMAD M.: The walk partition and colorations of a graph, **48**: 145–159 (1982)

PRASADA RAO, P. S. S. N. V.: *See* Rao, K. P. S. Bhaskara

PRASADA RAO, P. S. S. N. V. AND RAO, K. P. S. BHASKARA: On generalized inverses of Boolean matrices, **11**: 135–153 (1975)

PRATHER, RONALD E.: Epimorphisms of free monoids, **13**: 201–205 (1976)

PRATZEL-WOLTERS, D.: Canonical forms for linear systems, **50**: 437–473 (1983)

PRATZEL-WOLTERS, D.: *See* Hinrichsen, D.

PRECHT, M.: *See* Rao, P. S. S. N. V. P.

PRZYLUSKI, K. MACIEJ: About some problems of spectral synthesis, **50**: 475–485 (1983)

PSIMARNI, A.: *See* Hadjidimos, A.

PTAK, VLASTIMIL: A maximum problem for matrices, **28**: 193–204 (1979)

PTAK, VLASTIMIL: An equation of Lyapunov type, **39**: 73–82 (1981)

PTAK, VLASTIMIL: An extremal problem for operators: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 213–226 (1986)

PTAK, VLASTIMIL: Bezoutians and projections, **59**: 29–42 (1984)

PTAK, VLASTIMIL: Biorthogonal systems and the infinite companion matrix, **49**: 57–78 (1983)

PTAK, VLASTIMIL: Explicit expressions for Bezoutians, **59**: 43–54 (1984)

PTAK, VLASTIMIL: Hankel matrices and the infinite companion, **81**: 199–206 (1986)

PTAK, VLASTIMIL: Lyapunov equations and Gram matrices, **49**: 33–55 (1983)

PTAK, VLASTIMIL: Lyapunov, Bezout, and Hankel, **58**: 363–390 (1984)

PTAK, VLASTIMIL: Nondiscrete mathematical induction and iterative existence proofs, **13**: 223–238 (1976)

PTAK, VLASTIMIL: Spectral radius, norms of iterates, ande critical exponent, **1**: 245–260 (1968)

PTAK, VLASTIMIL: *See* Fiedler, Miroslav

PTAK, VLASTIMIL: *See* Haynsworth, Emilie

PTAK, VLASTIMIL AND WIMMER, HARALD K.: On the Bezoutian for polynomial matrices, **71**: 267–272 (1985)

PTAK, VLASTIMIL AND YOUNG, N. J.: Functions of operators and the spectral radius, **29**: 357–392 (1980)

PTAK, VLASTIMIL AND YOUNG, N. J.: Zero location by Hermitian forms: the singular case, **43**: 181–196 (1982)

PUKELSHEIM, F.: *See* Muller-Funk, U.

PUKELSHEIM, F.: *See* Olkin, I.

PUKELSHEIM, FRIEDRICH: *See* Baksalary, Jerzy K.

PULLEYBLANK, W. R.: *See* Giles, F. R.

PULLMAN, N. J.: A geometric approach to the theory of nonnegative matrices, **4**: 297–312 (1971)

PULLMAN, NORMAN J.: *See* Beasley, LeRoy B.

PURI, MADAN L.: *See* Mitra, Sujit Kumar

PURI, PREM S. AND RAMASWAMI, V.: Maximum and minimum weighted diagonal sums of certain non-negative matrices, **16**: 247–266 (1977)

PUSCHMANN, HEINRICH AND NORDIO, MARCELO: Zwei unzulassige Verstarkungen der Vermutung von Wilkinson: Two inadmissible strengthenings of Wilkinson's conjecture, **72**: 167–176 (1985)

PUTCHA, MOHAN S.: Quadratic semigroups on affine spaces, **26**: 107–121 (1979)

PUTCHA, MOHAN S.: *See* Hartwig, Robert E.

PUYSTJENS, R.: *See* Huylebrouck, D.

PUYSTJENS, R. AND VAN GEEL, J.: Diagonalization of matrices over graded principal ideal domains, **48**: 265–281 (1982)

PUYSTJENS, ROLAND: *See* Robinson, Donald W.

PUYSTJENS, ROLAND AND ROBINSON, DONALD W.: The Moore-Penrose inverse of a morphism with factorization, **40**: 129–141 (1981)

PYE, W. C.: *See* Jeter, M. W.

PYE, W. C., BOULLION, T. L., AND ATCHISON, T. A.: The pseudoinverse of a centrosymmetric matrix, **6**: 201–204 (1973)

PYE, W. C. AND JETER, MELVYN W.: A minimal permanent-like function, **12**: 171–178 (1975)

PYE, WALLACE C.: Nonnegative Drazin inverses, **30**: 149–153 (1980)

PYE, WALLACE C.: *See* Jeter, Melvyn W.

QI, LI QUN: Some simple estimates for singular values of a matrix, **56**: 105–119 (1984)

QIAO, SAN ZHENG: *See* Luk, Franklin T.

QUACKENBUSH, ROBERT W.: Near vector spaces over $GF(q)$ and $(v, q+1, 1)$-BIBD's, **10**: 259–266 (1975)

QUEBBEMANN, H.-G.: A representation theorem for algebras with involution, **94**: 193–195 (1987)

QUEIRO, JOAO FILIPE: Invariant factors as approximation numbers, **49**: 131–136 (1983)

QUEIRO, JOAO FILIPE: On the interlacing property for singular values and eigenvalues, **97**: 23–28 (1987)

QUEIRO, JOAO FILIPE: *See* Bebiano, Natalia

RACKUSIN, JEFFREY AND WATKINS, WILLIAM: Linear maps on matrices: the invariance of symmetric polynomials, **17**: 269–276 (1977)

RADJAVI, H.: *See* Choi, M. D.

RADJAVI, H.: *See* Gustafson, W. H.

RADJAVI, HEYDAR: Commutativity-preserving operators on symmetric matrices, **61**: 219–224 (1984)

RADJAVI, HEYDAR: Decomposition of matrices into simple involutions, **12**: 247–255 (1975)

RADO, R.: An extension of Sylvester's law of inertia, **1**: 29–32 (1968)

RAGHAVAN, T. E. S.: Completely mixed games and M-matrices, **21**: 35–45 (1978)

RAGHAVAN, T. E. S.: On pairs of multidimensional matrices, **62**: 263–268 (1984)

RAGHAVAN, T. E. S.: *See* Bapat, R.

RAINEY, JOHN W.: The tridiagonal forms of real, nonderogatory matrices, **1**: 465–469 (1968)

RAMAMURTHY, K. G.: A polynomial algorithm for testing the nonnegativity of principal minors of Z-matrices, **83**: 39–47 (1986)

RAMAMURTHY, K. G.: *See* Mohan, S. R.

RAMAMURTHY, K. G. AND MOHAN, S. R.: Nonnegativity of principal minors of generalized inverses of P_0-matrices, **65**: 125–131 (1985)

RAMASWAMI, V.: *See* Puri, Prem S.

RAMIREZ, DONALD E.: *See* Dunkl, Charles F.

RAN, A. C. M. AND RODMAN, L.: Stability of invariant maximal semidefinite subspaces. I, **62**: 51–86 (1984)

RAN, A. C. M. AND RODMAN, L.: Stability of invariant maximal semidefinite subspaces. II. Applications: selfadjoint rational matrix functions, algebraic Riccati equations, **63**: 133–173 (1984)

RAN, A. M. C. AND VREUGDENHIL, R.: Existence and comparison theorems for algebraic Riccati equations for continuous- and discrete-time systems, **99**: 63–83 (1988)

RAN, ANDRE AND UHLIG, FRANK: A note on a new description of invariant maximal nonnegative subspaces in an indefinite inner product space, **71**: 273–274 (1985)

RAN, ANDRE C. M.: *See* Ball, Joseph A.

RANI, OMA: *See* Kaul, R. N.

RAO, C. RADHAKRISHNA: The inefficiency of least squares: extensions of the Kantorovich inequality, **70**: 249–255 (1985)

RAO, C. RADHAKRISHNA: *See* Mitra, Sujit Kumar

RAO, C. RADHAKRISHNA AND YANAI, HARUO: Generalized inverse of linear transformations: a geometric approach, **66**: 87–98 (1985)

RAO, C. RADHAKRISHNA AND YANAI, HARUO: Generalized inverses of partitioned matrices useful in statistical applications, **70**: 105–113 (1985)

RAO, K. P. S. BHASKARA: On generalized inverses of matrices over integral domains, **49**: 179–189 (1983)

Rao, K. P. S. Bhaskara: *See* Prasada Rao, P. S. S. N. V.

Rao, K. P. S. Bhaskara and Prasada Rao, P. S. S. N. V.: On generalized inverses of Boolean matrices. II, **42**: 133–144 (1982)

Rao, P. S. S. N. V. P. and Precht, M.: On a conjecture of Hoerl and Kennard on a property of least squares estimators of regression coefficients, **67**: 99–101 (1985)

Rao, S. B.: *See* Kumar, Vijaya

Rascle, M.: *See* Robert, F.

Rashwan, Hamza: *See* George, Alan

Rathore, R. K. S. and Chetty, C. S. K.: Some angularity and inertia theorems related to normal matrices, **40**: 69–77 (1981)

Raykhshteyn, Boris: On rational invariants of a set of symmetric matrices, **54**: 17–28 (1983)

Rebman, Kenneth R.: Total unimodularity and the transportation problem: a generalization, **8**: 11–24 (1974)

Rebman, Kenneth R.: *See* Merris, Russell

Reed, I. S.: *See* Hsu, I. S.

Rehm, Hans P.: On Ochoa's special matrices in matrix classes, **17**: 181–188 (1977)

Reichel, L.: *See* Gragg, W. B.

Reichstein, Boris: On expressing a cubic form as a sum of cubes of linear forms, **86**: 91–122 (1987)

Reichstein, Boris: On symmetric operators of higher degree and their applications, **75**: 155–172 (1986)

Resasco, Diana C.: *See* Chan, Tony F.

Rheinboldt, W.: *See* More, J.

Rheinboldt, Werner C. and Shepherd, Roger A.: On a characterization of tridiagonal matrices by M. Fiedler, **8**: 87–90 (1974)

Rice, John R.: Performance analysis of 13 methods to solve the Galerkin method equations, **52**: 533–546 (1983)

Ries, Manfred, Trottenberg, Ulrich, and Winter, Gerd: A note on MGR methods, **49**: 1–26 (1983)

Riha, W. O. J.: *See* Lau, K. K.

Ringel, Claus Michael: *See* Dlab, Vlastimil

Rinott, Yosef: *See* Karlin, Samuel

Ritov, Yakov: *See* Haviv, Moshe

Rizvi, S. A. H.: Inverses of quasitridiagonal matrices, **56**: 177–184 (1984)

Robbin, J. W.: Lie algebras of infinitesimal norm isometries, **10**: 95–102 (1975)

Robbin, J. W.: *See* Friedland, S.

Robers, Philip D. and Ben-Israel, Adi: A suboptimization method for interval linear programming: A new method for linear programming, **3**: 383–405 (1970)

Robert, F.: Blocs-*H*-matrices et convergence des methodes iteratives classiques par blocs, **2**: 223–265 (1969)

Robert, F.: Contraction en norme vectorielle: convergence d'iterations chaotiques pour des equations non lineaires de point fixe a plusieurs variables: Collection of articles dedicated to Olga Taussky Todd, **13**: 19–35 (1976)

Robert, F.: Derivee discrete et comportement local d'une iteration discrete: Discrete derivative and local behavior of a discrete iteration, **52**: 547–589 (1983)

Robert, F.: Iterations sur des ensembles finis et automates cellulaires contractants, **29**: 393–412 (1980)

Robert, F. and Rascle, M.: Contraction faible en norme vectorielle—theorie de Perron-Frobenius pour le cas de blocs, **6**: 305–335 (1973)

Robert, Francois: Theoremes de Perron-Frobenius et Stein-Rosenberg booleens, **19**: 237–250 (1978)

Robert, Francois: *See* Della Dora, Jean

Robert, Yves: Regular incomplete factorizations of real positive definite matrices, **48**: 105–117 (1982)

Robertson, Brian: *See* Johnson, Charles R.

Robinson, Cecil E., Jr.: Generalized inverses of substochastic matrices, **91**: 89–98 (1987)

Robinson, Cecil E., Jr.: Green's relations for substochastic matrices, **80**: 39–53 (1986)

Robinson, Donald W.: Covariance of Moore-Penrose inverses with respect to an invertible matrix, **71**: 275–281 (1985)

Robinson, Donald W.: Nullities of submatrices of the Moore-Penrose inverse, **94**: 127–132 (1987)

Robinson, Donald W.: On the covariance of the Moore-Penrose inverse, **61**: 91–99 (1984)

Robinson, Donald W.: Separable endomor-

phisms and higher-order commutators, **4**: 285–296 (1971)

ROBINSON, DONALD W.: The Frobenius rank equality for morphisms, **29**: 413–421 (1980)

ROBINSON, DONALD W.: *See* Davis, Daniel L.

ROBINSON, DONALD W.: *See* Hansen, Gary W.

ROBINSON, DONALD W.: *See* Puystjens, Roland

ROBINSON, DONALD W., PUYSTJENS, ROLAND, AND VAN GEEL, JAN: Categories of matrices with only obvious Moore-Penrose inverses, **97**: 93–102 (1987)

ROBINSON, DONALD W. AND PUYSTJENS, ROLAND: EP morphisms, **64**: 157–174 (1985)

ROBINSON, DONALD W. AND PUYSTJENS, ROLAND: Generalized inverses of morphisms with kernels, **96**: 65–85 (1987)

ROBINSON, HERBERT: *See* Marcus, Marvin

ROBINSON, HERBERT A.: Multilinear transformations on matrices, **20**: 205–218 (1978)

ROBINSON, HERBERT A.: *See* Johnson, Charles R.

ROBINSON, NORMAN F. AND SMILEY, M. F.: A generalization of the property L of Motzkin and Taussky, **4**: 323–328 (1971)

ROBINSON, STEPHEN M.: Bounds for error in the solution set of a perturbed linear program, **6**: 69–81 (1973)

RODMAN, L.: *See* Gohberg, I.

RODMAN, L.: *See* Ran, A. C. M.

RODMAN, LEIBA: On connected components in the set of divisors of a monic matrix polynomial, **31**: 33–42 (1980)

RODMAN, LEIBA: *See* Ballantine, C. S.

ROESLER, FRIEDRICH: Riemann's hypothesis as an eigenvalue problem. II, **92**: 45–73 (1987)

ROESLER, FRIEDRICH: Riemann's hypothesis as an eigenvalue problem, **81**: 153–198 (1986)

ROHN, JIRI: Interval linear systems with prscribed column sums, **39**: 143–148 (1981)

ROITMAN, MOSHE: A problem on conjugacy of matrices, **19**: 87–89 (1978)

ROMANI, FRANCESCO: On the additive structure of the inverses of banded matrices, **80**: 131–140 (1986)

RONG, GUANG HAO: The error bound of the perturbation of the Drazin inverse, **47**: 159–168 (1982)

ROSCOE, D. F.: The application of matrix theorems to the construction of stable difference representations of the equations of fluid dynamics, **14**: 123–130 (1976)

ROSE, DONALD J.: Matrix identities of the fast Fourier transform, **29**: 423–443 (1980)

ROSE, NICHOLAS J.: A note on computing the Drazin inverse, **15**: 95–98 (1976)

ROSE, NICHOLAS J.: *See* Stadelmaier, Michael W.

ROSENBERG, I. G.: *See* Deza, M.

ROSENTHAL, ERIK: A remark on Burnside's theorem on matrix algebras, **63**: 175–177 (1984)

ROSS, JEFFREY A.: *See* Brualdi, Richard A.

ROTHBLUM, URIEL G.: A rank characterization of the number of final classes of a nonnegative matrix, **23**: 65–68 (1979)

ROTHBLUM, URIEL G.: Algebraic eigenspaces of nonnegative matrices, **12**: 281–292 (1975)

ROTHBLUM, URIEL G.: An index classification of M-matrices, **23**: 1–12 (1979)

ROTHBLUM, URIEL G.: Bounds on the indices of the spectral-circle eigenvalues of a nonnegative matrix, **29**: 445–450 (1980)

ROTHBLUM, URIEL G.: Resolvent expansions of matrices and applications, **38**: 33–49 (1981)

ROTHBLUM, URIEL G.: *See* Anstreicher, Kurt M.

ROTHBLUM, URIEL G.: *See* Haviv, Moshe

ROTHBLUM, URIEL G. AND SCHNEIDER, HANS: Characterizations of extreme normalized circulations satisfying linear constraints, **46**: 61–72 (1982)

ROTHBLUM, URIEL G. AND TAN, CHOON PENG: Multiplicative processes reaching stationarity in finite time, **55**: 155–167 (1983)

ROTHBLUM, URIEL G. AND TAN, CHOON PENG: Upper bounds on the maximum modulus of subdominant eigenvalues of nonnegative matrices, **66**: 45–86 (1985)

ROUSH, FRED N.: *See* Bruning, Jochen

ROUSH, FRED W.: *See* Kim, Ki Hang

ROUSSEAU, C. C.: *See* Faudree, R. J.

ROZSA, P.: On periodic continuants, **2**: 267–274 (1969)

RUCKMANN, J. : *See* Jongen, H. Th.

RUDEANU, SERGIU: *See* Melter, Robert A.

RUDRAIAH, N.: *See* Shivakumar, P. N.

RUESS, W. M. AND SUMMERS, W. H.: Asymp-

totic almost periodicity and motions of semigroups of operators: Proceedings of the symposium on operator theory (Athens, 1985), 84: 335–351 (1986)

RUHE, AXEL: Numerical aspects of Gram–Schmidt orthogonalization of vectors, 52: 591–601 (1983)

RUHE, AXEL: On the closeness of eigenvalues and singular values for almost normal matrices, 11: 87–93 (1975)

RUHE, AXEL: Rational Krylov sequence methods for eigenvalue computation, 58: 391–405 (1984)

RUHE, AXEL: *See* Ericsson, Thomas

RUIZ CLAEYSSEN, JULIO CESAR AND DOS SANTOS LEAL, LIARA APARECIDA: Diagonalization and spectral decomposition of factor block circulant matrices, 99: 41–61 (1988)

RUNCKEL, HANS-J. AND PITTELKOW, UWE: Practical computation of matrix functions, 49: 161–178 (1983)

RUSHANAN, JOSEPH J.: *See* Pless, Vera

RUSSELL, A. M. AND UPTON, C. J. F.: A class of positive semidefinite matrices, 93: 121–126 (1987)

RUTISHAUSER, H.: Once again: The least square problem, 1: 479–488 (1968)

RYAVEC, C.: Inequalities for the zeros of Dirichlet L-functions, 28: 205–211 (1979)

RYSER, H. J.: A generalization of the matrix equation $A^2 = J$, 3: 451–460 (1970)

RYSER, H. J.: A new look at the optimal assignment problem, 66: 113–121 (1985)

RYSER, H. J.: A theorem in combinatorial matrix theory, 29: 451–458 (1980)

RYSER, H. J.: Matrices and set intersections, 37: 267–275 (1981)

RYSER, H. J.: *See* Brualdi, Richard A.

SA, EDUARDO M.: *See* Grone, Robert

SAAD, Y.: Variations on Arnoldi's method for computing eigenelements of large unsymmetric matrices, 34: 269–295 (1980)

SAAD, YCEF: *See* Parlett, Beresford N.

SAAD, YOUCEF: Communication complexity of the Gaussian elimination algorithm on multiprocessors: Special volume on parallel computing, 77: 315–340 (1986)

SAAD, YOUCEF: *See* Ipsen, Ilse C. F.

SAFF, E. B.: *See* Anderson, N.

SAFF, EDWARD B.: *See* de Boor, Carl

SAIGAL, R.: *See* Kojima, M.

SAIGAL, ROMESH: On the modularity of a matrix, 5: 39–48 (1972)

SAIN, MICHAEL K.: *See* Wyman, Bostwick F.

SAITOH, SABUROU: Positive definite Hermitian matrices and reproducing kernels, 48: 119–130 (1982)

SAITOH, SABUROU: Quadratic inequalities deduced from the theory of reproducing kernels, 93: 171–178 (1987)

SAKAI, YUJI: Continuous versions of an inequality due to Hoffman and Wielandt, 71: 283–287 (1985)

SALAMON, PETER: *See* Donald, John

SALZBERG, PABLO M.: The minimal generating space of a polynomial, 36: 89–96 (1981)

SALZMANN, FRANK L.: A note on eigenvalues of nonnegative matrices, 5: 329–338 (1972)

SAMPSON, ALLAN R.: A note on a new matrix decomposition, 8: 459–463 (1974)

SAMPSON, ALLAN R.: *See* Nguyen, Truc T.

SAMPSON, ALLAN R.: *See* Olkin, Ingram

SANDY, MARKUS: *See* Marcus, Marvin

SANE, SHARAD S.: *See* Drake, David A.

SANKOFF, DAVID: Context-free grammars and nonnegative matrices, 5: 277–281 (1972)

SANTOS, MARIA CELIA: On a class of methods for the computation of the spectral radius and the Perron vector of a nonnegative, irreducible matrix, 92: 209–223 (1987)

SATYANARAYANA, K.: *See* Narayana Rao, M. L.

SAUER, T.: *See* Li, T.-Y.

SAUNDERS, B. DAVID: A condition for the convexity of the norm-numerical range of a matrix, 16: 167–175 (1977)

SAUNDERS, B. DAVID: *See* Berman, Abraham

SAUNDERS, MICHAEL A.: *See* Gill, Philip E.

SAUTTER, W.: *See* Deuflhard, P.

SAXENA, R. B., SHARMA, A., AND ZIEGLER, Z.: Hermite-Birkhoff interpolation on roots of unity and Walsh equiconvergence, 52: 603–615 (1983)

SCHAEFER, H. H.: A metric variant of Frobenius's theorem and some other remarks on positive matrices, 42: 175–182 (1982)

SCHAFKE, R.: *See* Lutz, D. A.

SCHEFFOLD, EGON: Eine Abschatzung fur die

subdominanten Eigenwerte nichtnegativer Matrizen, **19**: 91–93 (1978)

SCHMID, PETER: Rational matrix groups of a special type, **71**: 289–293 (1985)

SCHMIDT, GUNTHER AND STROHLEIN, THOMAS: A Boolean matrix iteration in timetable construction, **15**: 27–51 (1976)

SCHNEIDER, HANS: Bound norms, **3**: 11–21 (1970)

SCHNEIDER, HANS: Geometric conditions for the existence of positive eigenvalues of matrices, **38**: 253–271 (1981)

SCHNEIDER, HANS: The concepts of irreducibility and full indecomposability of a matrix in the works of Frobenius, Konig and Markov, **18**: 139–162 (1977)

SCHNEIDER, HANS: The influence of the marked reduced graph of a nonnegative matrix on the Jordan form and on related properties: a survey: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 161–189 (1986)

SCHNEIDER, HANS: Theorems on *M*-splittings of a singular *M*-matrix which depend on graph structure, **58**: 407–424 (1984)

SCHNEIDER, HANS: *See* Barker, G. P.

SCHNEIDER, HANS: *See* Berman, Abraham

SCHNEIDER, HANS: *See* Coxson, Pamela G.

SCHNEIDER, HANS: *See* Deutsch, Emeric

SCHNEIDER, HANS: *See* Engel, Gernot M.

SCHNEIDER, HANS: *See* Hershkowitz, Daniel

SCHNEIDER, HANS: *See* Loewy, Raphael

SCHNEIDER, HANS: *See* Menon, M. V.

SCHNEIDER, HANS: *See* Rothblum, Uriel G.

SCHNEIDER, HANS AND TURNER, R. E. L.: Diagonal norm Hermitian matrices, **8**: 375–412 (1974)

SCHNEIDER, N.: *See* Alefeld, G.

SCHNIBBEN, GEORGE E.: *See* Brawley, J. V.

SCHOCK, EBERHARD: What are the proper condition numbers of discretized ill-posed problems?, **81**: 129–136 (1986)

SCHOENBERG, I. J.: Interpolating splines as limits of polynomials, **52**: 617–628 (1983)

SCHOENBERG, I. J.: *See* Lipow, Peter R.

SCHOENBERG, I. J. AND SHARMA, A.: Cardinal interpolation and spline functions. V. The B-splines for cardinal Hermite interpolation, **7**: 1–42 (1973)

SCHONHAGE, ARNOLD: Arbitrary perturbations of Hermitian matrices, **24**: 143–149 (1979)

SCHREIBER, ROBERT: Generalized iterative methods for semidefinite linear systems, **62**: 219–230 (1984)

SCHREIBER, ROBERT: *See* Elden, Lars

SCHRIJVER, A.: On total dual integrality, **38**: 27–32 (1981)

SCHULTZ, MARTIN H.: *See* Eisenstat, Stanley C.

SCHULTZ, MARTIN H.: *See* Ipsen, Ilse C. F.

SCHUMACHER, J. M.: The algebraic regulator problem from the state-space point of view, **50**: 487–520 (1983)

SCHWARZ, BINYAMIN AND ZAKS, ABRAHAM: Contraction of the matrix unit disk: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 353–357 (1986)

SCHWENK, ALLEN J.: Tight bounds on the spectral radius of asymmetric nonnegative matrices, **75**: 257–265 (1986)

SCHWERDTFEGER, H.: Remarks on the generalized inverse of a matrix, **1**: 325–328 (1968)

SCHWERDTFEGER, HANS: On the covariance of the Moore-Penrose inverse, **52**: 629–643 (1983)

SCOTT, ALASTAIR J. AND STYAN, GEORGE P. H.: On a separation theorem for generalized eigenvalues and a problem in the analysis of sample surveys, **70**: 209–224 (1985)

SCOTT, DAVID S.: Avoiding the square-root bottleneck in the Choleski factorization of a matrix on a parallel computer: Special volume on parallel computing, **77**: 341–344 (1986)

SCOTT, DAVID S.: On the accuracy of the Gerschgorin circle theorem for bounding the spread of a real symmetric matrix, **65**: 147–155 (1985)

SCOTT, DAVID S., HEATH, MICHAEL T., AND WARD, ROBERT C.: Parallel block Jacobi eigenvalue algorithms using systolic arrays: Special volume on parallel computing, **77**: 345–355 (1986)

SEARLE, S. R.: On inverting circulant matrices, **25**: 77–89 (1979)

SEBERRY, JENNIFER AND LAM, CLEMENT W. H.: On orthogonal matrices with constant diagonal, **46**: 117–129 (1982)

SEIDEL, J. J.: Strongly regular graphs with $(-1,1,0)$ adjacency matrix having eigenvalue 3, 1: 281–298 (1968)
SEIDEL, J. J.: *See* Blokhuis, A.
SEIDMAN, THOMAS I.: An inequality for complex matrices, 8: 327–330 (1974)
SEKERKA, BOHUSLAV: *See* Mandel, Jan
SELLERS, PETER H.: *See* Cohen, Joel E.
SEMAL, P.: *See* Courtois, P.-J.
SENETA, E.: Computing the stationary distribution for infinite Markov chains, 34: 259–267 (1980)
SENETA, E.: Explicit forms for ergodicity coefficients and spectrum localization, 60: 187–197 (1984)
SENETA, E.: *See* Isaacson, Dean
SENETA, E. AND SHERIDAN, SUZANNE: Strong ergodicity of nonnegative matrix products, 37: 277–292 (1981)
SENGUPTA, SAILES KUMAR: Comparison of eigenvectors of irreducible stochastic matrices, 12: 101–110 (1975)
SEXTON, H., SHENSA, M., AND SPEISER, J.: Remarks on a displacement-rank inversion method for Toeplitz systems, 45: 127–130 (1982)
SHA, HU YUN: Estimation of the eigenvalues of AB for $A > 0, B > 0$, 73: 147–150 (1986)
SHAH, K. R.: *See* Khatri, C. G.
SHALOM, TAMIR: On algebras of Toeplitz matrices, 96: 211–226 (1987)
SHALOM, TAMIR: *See* Ben-Artzi, Asher
SHAMIR, T.: An algebraic approach to the partial realization problem, 73: 171–196 (1986)
SHAMIR, T. AND FUHRMANN, P. A.: Minimal factorizations of rational matrix functions in terms of polynomial models, 68: 67–91 (1985)
SHANE, B. A. AND BARNETT, S.: On the bilinear transformation of companion matrices, 9: 175–184 (1974)
SHANGJUN, YANG AND BARKER, GEORGE P.: On the exponent of a primitive, minimally strong digraph, 99: 177–198 (1988)
SHANNY, R. F.: *See* Brualdi, R. A.
SHAO, JIA YU: Matrices permutation equivalent to primitive matrices, 65: 225–247 (1985)
SHAO, JIA YU: On a conjecture about the exponent set of primitive matrices, 65: 91–123 (1985)
SHAO, JIA YU: On the exponent of a primitive digraph, 64: 21–31 (1985)
SHAO, JIA YU: Products of irreducible matrices, 68: 131–143 (1985)
SHAO, JIA YU AND LI, QIAO: On the index of convergence of an irreducible Boolean matrix, 97: 185–210 (1987)
SHAPIRO, A.: *See* Browne, M. W.
SHAPIRO, ALEXANDER: Extremal problems on the set of nonnegative definite matrices, 67: 7–18 (1985)
SHAPIRO, ALEXANDER: Identifiability of factor analysis: some results and open problems, 70: 1–7 (1985)
SHAPIRO, ALEXANDER: On the unsolvability of inverse eigenvalues problems almost everywhere, 49: 27–31 (1983)
SHAPIRO, H.: Simultaneous block triangularization and block diagonalization of sets of matrices, 25: 129–137 (1979)
SHAPIRO, HELENE: A conjecture of Kippenhahn about the characteristic polynomial of a pencil generated by two Hermitian matrices. II, 45: 97–108 (1982)
SHAPIRO, HELENE: Hermitian pencils with a cubic minimal polynomial, 48: 81–103 (1982)
SHAPIRO, HELENE: On a conjecture of Kippenhahn about the characteristic polynomial of a pencil generated by two Hermitian matrices. I, 43: 201–221 (1982)
SHAPIRO, HELENE: *See* Coxson, Pamela G.
SHAPIRO, HELENE M.: *See* Gaines, Fergus J.
SHARMA, A.: *See* Fabrykowski, J.
SHARMA, A.: *See* Saxena, R. B.
SHARMA, A.: *See* Schoenberg, I. J.
SHARMA, BHU DEV AND DASS, BAL KISHAN: On linear codes correcting random and low-density burst errors, 16: 5–18 (1977)
SHARPE, D. W.: Grade and the theory of linear equations, 18: 25–32 (1977)
SHASHA, DAFNA AND BERMAN, ABRAHAM: On the uniqueness of the Lyapunov scaling factors, 91: 53–63 (1987)
SHAYMAN, MARK A.: *See* Helmke, Uwe

SHEEHAN, J.: *See* Faudree, R. J.

SHEKHTMAN, BORIS: On some problems of M. Z. Nashed on outer inverses, **76**: 149–152 (1986)

SHEMESH, DAN: Common eigenvectors of two matrices, **62**: 11–18 (1984)

SHEMESH, DAN: Unobservable subspaces and common roots of several polynomials, **95**: 187–210 (1987)

SHENG, RONG QIN: Properties of the Golub-Wilkinson algorithm, **92**: 75–80 (1987)

SHENSA, M.: *See* Sexton, H.

SHEPHERD, ROGER A.: *See* Rheinboldt, Werner C.

SHERIDAN, SUZANNE: *See* Seneta, E.

SHERIF, NAGWA: *See* Kovarik, Zdislav V.

SHIEH, LEANG S.: *See* Tsay, Yih T.

SHIFLETT, R. C.: *See* Benson, R. V.

SHILOACH, YOSSI: *See* Aspvall, Bengt

SHINOZAKI, NOBUO AND SIBUYA, MASAAKI: Further results on the reverse-order law, **27**: 9–16 (1979)

SHINOZAKI, NOBUO AND SIBUYA, MASAAKI: The reverse order law $(AB)^- = B^-A^-$, **9**: 29–40 (1974)

SHISHA, O.: *See* Arms, R. J.

SHIVAKUMAR, P. N., WILLIAMS, J. J., AND RUDRAIAH, N.: Eigenvalues for infinite matrices, **96**: 35–63 (1987)

SHIVAKUMAR, P. N. AND WONG, R.: Linear equations in infinite matrices, **7**: 53–62 (1973)

SHRIKHANDE, MOHAN: A survey of some problems in combinatorial designs—a matrix approach, **79**: 215–247 (1986)

SHUB, M.: *See* Weiss, N.

SIBUYA, MASAAKI: *See* Shinozaki, Nobuo

SIERKSMA, GERARD: Nonnegative matrices: the open Leontief model, **26**: 175–201 (1979)

SIERKSMA, GERARD AND STEENGE, ALBERT E.: Two-minor stable matrices and the open Leontief model, **95**: 1–10 (1987)

SIERKSMA, GERARD AND STERKEN, ELMER: The structure matrix of (0,1)-matrices: its rank, trace, and eigenvalues. An application to econometric models, **83**: 151–166 (1986)

SILBER, ROBERT: A linear dependence theorem with application to the calculus of variations, **3**: 441–450 (1970)

SILVA, F. CONCEICAO: On the invariant factors of the matrix $XAY + B$, **96**: 1–16 (1987)

SILVA, ILDA P.: *See* Cordovil, Raul

SILVERMAN, L. M.: *See* Hautus, M. L. J.

SIMOES-PEREIRA, J. M. S. AND ZAMFIRESCU, CHRISTINA M.: Submatrices of non-tree-realizable distance matrices, **44**: 1–17 (1982)

SIMON, BARRY: *See* Friedland, Shmuel

SIMON, HORST D.: Analysis of the symmetric Lanczos algorithm with reorthogonalization methods, **61**: 101–131 (1984)

SIMS, S. E.: *See* McMath, John S.

SINGER, IVAN: *See* Martinez-Legaz, Juan-Enrique

SINGHI, N. M.: *See* Kumar, Vijaya

SINKHORN, RICHARD: A relationship between stochastic matrices and eigenvalues of products, **23**: 53–63 (1979)

SINKHORN, RICHARD: Doubly stochastic matrices which have certain diagonals with constant sums, **16**: 79–82 (1977)

SINKHORN, RICHARD: Power symmetric stochastic matrices, **40**: 225–228 (1981)

SIPPEL, C.: *See* Geldenhuys, G.

SISKAKIS, ARISTOMENIS G.: Weighted composition semigroups on Hardy spaces: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 359–371 (1986)

SIZER, WALTER S.: Triangularizing semigroups of matrices over a skew field, **16**: 177–187 (1977)

SLEPIAN, PAUL: *See* Loughlin, Timothy A.

SLOANE, N. J. A.: *See* Graham, R. L.

SMEDS, PER A.: Line digraphs and the Moore-Penrose inverse, **36**: 165–172 (1981)

SMILEY, M. F.: *See* Robinson, Norman F.

SMITH, KIRBY C.: The centralizer of a matrix with real quaternion elements, **8**: 331–335 (1974)

SMITH, KIRBY C.: The centralizer of a semi-linear transformation, **14**: 21–27 (1976)

SMITH, P. W.: *See* Cavaretta, A. S., Jr.

SMITH, P. W. AND WOLKOWICZ, HENRY: Dimensionality of bi-infinite systems, **57**: 115–130 (1984)

SMITH, R. A. AND MIRSKY, L.: The areal spread of matrices, **2**: 127–129 (1969)

SMITH, RONALD L.: Factorization of symmetric singular M-matrices, **23**: 253–259 (1979)

SMITH, RONALD L.: Moore-Penrose inverses of block circulant and block k-circulant matrices, **16**: 237–245 (1977)

SMITH, RONALD L.: On Markham's M-matrix properties, **87**: 189–195 (1987)

SMITH, RONALD L.: On the spectrum of N_0-matrices, **83**: 129–134 (1986)

SMITH, RONALD L.: The Moore-Penrose inverse of a retrocirculant, **22**: 1–8 (1978)

SMITH, RUSSELL A.: Area of convex hull of matrix eigenvalues, **4**: 77–78 (1971)

SMOOKE, M. D.: *See* Mattheij, R. M. M.

SODERLIND, G.: *See* Mattheij, R. M. M.

SODUPE, MARIA-JOSE: Interlacing inequalities for generalized singular values, **87**: 85–92 (1987)

SOLHEID, ERNIE S.: *See* Brualdi, Richard A.

SOLOMBRINO, L.: *See* Garola, C.

SORENSEN, D. C.: *See* Heath, M. T.

SOUROUR, A. R.: Anti-invariant subspaces of maximum dimension, **74**: 39–45 (1986)

SPAIN, P. G.: Solving an operator equation by iteration, **20**: 69–70 (1978)

SPEISER, J.: *See* Sexton, H.

SPIGLER, RENATO: An application of group theory to matrices and to ordinary differential equations, **44**: 143–151 (1982)

SPINGARN, JONATHAN E.: A primal-dual projection method for solving systems of linear inequalities, **65**: 45–62 (1985)

SPINGARN, JONATHAN E.: A projection method for least-squares solutions to overdetermined systems of linear inequalities, **86**: 211–236 (1987)

SPREEN, DIETER: On some properties of the Cesaro limit of a stochastic matrix, **41**: 81–91 (1981)

STADELMAIER, M. W.: *See* Meyer, C. D., Jr.

STADELMAIER, MICHAEL W., ROSE, NICHOLAS J., POOLE, GEORGE D., AND MEYER, CARL D., JR.: Nonnegative matrices with power invariant zero patterns, **42**: 23–29 (1982)

STAFNEY, JAMES D.: Correction to: Functions of a matrix and their norms, **39**: 259–260 (1981)

STAFNEY, JAMES D.: Functions of a matrix and their norms, **20**: 87–94 (1978)

STANDISH, C. J.: Truncated Taylor series approximation to the state transition matrix of a continuous parameter finite Markov chain, **12**: 179–183 (1975)

STANFORD, DAVID P.: *See* Conner, Luther T., Jr.

STANLEY, RICHARD P.: A bound on the spectral radius of graphs with e edges, **87**: 267–269 (1987)

STANTON, R. G.: *See* Andres, T. H.

STAVRAKAKIS, NICOLAOS: *See* Kravvaritis, Dimitrios

STEEB, W.-H.: The relation between the Kronecker product, the trace calculation, and the one-dimensional Ising model, **37**: 261–265 (1981)

STEENGE, ALBERT E.: *See* Sierksma, Gerard

STEGALL, CHARLES: Optimization and differentiation in Banach spaces: Proceedings of the symposium on operator theory (Athens, 1985), **84**: 191–211 (1986)

STEIN, MARJORIE L.: A saddlepoint theorem for self-dual linear systems, **9**: 55–65 (1974)

STEIN, S. K.: Modified linear dependence and the capacity of a cyclic graph, **17**: 191–195 (1977)

STEMBRIDGE, JOHN R. AND TODD, JOHN: On a trigonometrical sum, **35**: 287–295 (1981)

STENS, R. L.: *See* Butzer, P. L.

STEPHENS, A. B.: *See* Kellogg, R. B.

STEPHENS, N. M.: *See* Atkinson, M. D.

STEPNIAK, CZESLAW: Ordering of nonnegative definite matrices with application to comparison of linear models, **70**: 67–71 (1985)

STEPNIAK, CZESLAW: Two orderings on a convex cone of nonnegative definite matrices, **94**: 263–272 (1987)

STERKEN, ELMER: *See* Sierksma, Gerard

STERN, RONALD J.: Generalized M-matrices, **41**: 201–208 (1981)

STERN, RONALD J.: On strictly positively invariant cones, **48**: 13–24 (1982)

STERN, RONALD J.: *See* Berman, Abraham

STERN, RONALD J. AND TSATSOMEROS, MICHAEL: Extended M-matrices and subtangentiality, **97**: 1–11 (1987)

STERNA-KARWAT, ALICJA: A note on additive convex processes, **57**: 1–12 (1984)

STERNA-KARWAT, ALICJA: On weak monomorphisms in the category of convex processes, **47**: 173–179 (1982)

STEUTEL, F. W.: *See* Hoekstra, A. H.

STEWART, G. W.: A note on the perturbation of singular values, **28**: 213–216 (1979)

STEWART, G. W.: A second order perturbation expansion for small singular values, **56**: 231–235 (1984)

STEWART, G. W.: Perturbation bounds for the definite generalized eigenvalue problem, **23**: 69–85 (1979)

STEWART, G. W.: Preface: A. S. Householder, **28**: 1–3 (1979)

STEWART, G. W.: *See* Golub, G. H.

STEWART, G. W.: *See* McAllister, D. F.

STEWART, G. W.: *See* O'Leary, Dianne P.

STEWART, W. J.: *See* McAllister, D. F.

STEWART, WILLIAM J.: *See* Cao, Wei Lu

STICKEL, EBERHARD: On the Frechet derivative of matrix functions, **91**: 83–88 (1987)

STOER, J.: Two examples on the convergence of certain rank-2 minimization methods for quadratic functionals in Hilbert space, **28**: 217–222 (1979)

STOER, J.: *See* Bauer, F. L.

STONE, RICHARD E.: *See* Cottle, Richard W.

STOYAN, GISBERT: On maximum principles for monotone matrices, **78**: 147–161 (1986)

STRASSEN, V.: Rank and optimal computation of generic tensors, **52**: 645–685 (1983)

STRAUS, ERNST G.: Ernst G. Straus (1922–1983), **64**: 1–19 (1985)

STRAUS, ERNST G.: *See* Goldberg, Moshe

STRAUSS, NICHOLAS: Jordan form of a binomial coefficient matrix over Z_p, **90**: 65–72 (1987)

STREIT, ROY L.: Saddle points and overdetermined complex equations, **64**: 57–76 (1985)

STRODIOT, J.-J.: *See* Nguyen, V. Hien

STROHLEIN, THOMAS: *See* Schmidt, Gunther

STRUPPA, DANIELE C.: *See* Berenstein, Carlos A.

STUART, JEFFREY L.: The decomposition of idempotents associated with inflators, **97**: 171–184 (1987)

STYAN, GEORGE P. H.: Hadamard products and multivariate statistical analysis, **6**: 217–240 (1973)

STYAN, GEORGE P. H.: On Lavoie's determinantal inequality, **37**: 77–80 (1981)

STYAN, GEORGE P. H.: *See* Hartwig, Robert E.

STYAN, GEORGE P. H.: *See* Merikoski, Jorma Kaarlo

STYAN, GEORGE P. H.: *See* Scott, Alastair J.

STYAN, GEORGE P. H.: *See* Wolkowicz, Henry

SUBRAMANIAN, B.: *See* Buoni, J. J.

SULAIMAN, MOHAMMAD M.: *See* Powers, David L.

SUMMERS, W. H.: *See* Ruess, W. M.

SUN, JI GUANG: A note on Stewart's theorem for definite matrix pairs, **48**: 331–339 (1982)

SUN, JI GUANG: *See* Elsner, Ludwig

SUNDER, V. S.: A noncommutative analogue of $|D(X^k)| = |kX^{k-1}|$, **44**: 87–95 (1982)

SUNDER, V. S.: On permutations, convex hulls, and normal operators, **48**: 403–411 (1982)

SUNDER, V. S.: *See* Bapat, R. B.

SUNG, C. H. AND TAM, B. S.: On the cone of a finite-dimensional compact convex set at a point, **90**: 47–55 (1987)

SWART, E. R.: *See* Fischer, P.

SYLVESTER, JOHN: On the dimension of spaces of linear transformations satisfying rank conditions, **78**: 1–10 (1986)

SZABO, PETER: *See* Butkovic, Peter

SZATROWSKI, TED H.: Asymptotic distributions in the testing and estimation of the missing-data multivariate normal linear patterned mean and correlation matrix, **67**: 215–231 (1985)

TADMOR, EITAN: Complex symmetric matrices with strongly stable iterates, **78**: 65–77 (1986)

TADMOR, EITAN: The equivalence of L_2-stability, the resolvent condition, and strict H-stability, **41**: 151–159 (1981)

TADMOR, EITAN: *See* Friedland, Shmuel

TADMOR, EITAN: *See* Goldberg, Moshe

TAKACS, LAJOS: Random walks on groups, **43**: 49–67 (1982)

TAKAHASHI, KATSUTOSHI: On relative primeness of operator polynomials, **50**: 521–526 (1983)

TAKEMURA, AKIMICHI: On the equivalence of proportional cell frequencies and orthogonality of interaction spaces in n-way ANOVA, **67**: 35–49 (1985)

TAM, B. S.: *See* Barker, G. P.

TAM, B. S.: *See* Sung, C. H.

TAM, BIT SHUN: A geometric treatment of generalized inverses and semigroups of nonnegative matrices, **41**: 225–272 (1981)

TAM, BIT SHUN: A note on cross-positive matrices, **12**: 7–9 (1975)

TAM, BIT SHUN: Generalized inverses of cone preserving maps, **40**: 189–202 (1981)

TAM, BIT SHUN: On indecomposable subcones, **22**: 33–40 (1978)

TAM, BIT SHUN: On the duality operator of a convex cone, **64**: 33–56 (1985)

TAM, BIT SHUN: On the semiring of cone preserving maps, **35**: 79–108 (1981)

TAM, BIT SHUN: Some results on cross-positive matrices, **15**: 173–176 (1976)

TAM, BIT SHUN: *See* Barker, George Phillip

TAM, BIT SHUN: *See* Loewy, Raphael

TAM, TIN YAU: Linear operators on matrices: the invariance of the decomposable numerical radius, **87**: 147–153 (1987)

TAM, TIN YAU: Linear operators on matrices: the invariance of the decomposable numerical range. II, **92**: 197–207 (1987)

TAM, TIN YAU: Linear operators on matrices: the invariance of the decomposable numerical range, **85**: 1–7 (1987)

TAM, TIN YAU: The generalized spectral matrices and radial matrices on symmetry classes of tensors, **85**: 29–48 (1987)

TAMIR, A.: *See* Barel, M.

TAMIR, A.: *See* Felzenbaum, A.

TAMMER, K.: *See* Jongen, H. Th.

TAN, CHOON PENG: *See* Rothblum, Uriel G.

TAN, KOK-KEONG: *See* Chan, Gin-Hor

TANABE, KUNIO: Neumann-type expansion of reflexive generalized inverses of a matrix and the hyperpower iterative method, **10**: 163–175 (1975)

TANG, WAI-SHING: On positive linear maps between matrix algebras, **79**: 33–44 (1986)

TANNENBAUM, ALLEN: On the stabilizer subgroup of a pair of matrices, **50**: 527–544 (1983)

TANNY, STEPHEN M. AND ZUKER, MICHAEL: The sensitivity of eigenvalues under elementary matrix perturbations, **86**: 123–143 (1987)

TARAZAGA, PABLO: *See* Marchi, Ezio

TAUB, HEDI AND GUTMAN, SHAUL: Roots of composite polynomials—an application to root clustering, **87**: 181–188 (1987)

TAUSSKY, OLGA: A generalization of matrix commutativity, **2**: 349–353 (1969)

TAUSSKY, OLGA: Additive commutators of rational 2×2 matrices, **12**: 1–6 (1975)

TAUSSKY, OLGA: Automorphs and generalized automorphs of quadratic forms treated as characteristic value relations, **1**: 349–356 (1968)

TAUSSKY, OLGA: More on norms from algebraic number fields, commutators and matrices which transform a rational matrix into its transpose, **29**: 459–464 (1980)

TAUSSKY, OLGA: On the congruence transformation of a pencil of real symmetric matrices to a pencil with identical characteristic polynomial, **52**: 687–691 (1983)

TAUSSKY, OLGA: Remarks concerning possible connections between Fermat's last theorem and integral $p \times p$ circulants, **71**: 295–297 (1985)

TAUSSKY, OLGA: Some facts concerning integral representations of the ideals in an algebraic number field, **31**: 245–248 (1980)

TAUSSKY, OLGA: The factorization of the adjugate of a finite matrix, **1**: 39–42 (1968)

TAUSSKY, OLGA: The many aspects of the Pythagorean triangles, **43**: 285–295 (1982)

TAUSSKY, OLGA: The role of symmetric matrices in the study of general matrices, **5**: 147–154 (1972)

TAUSSKY, OLGA: *See* Estes, Dennis R.

TAYLOR, JOHN B.: *See* Anderson, T. W.

TCHUENTE, MAURICE: Parallel calculation of a linear mapping on a computer network, **28**: 223–247 (1979)

TEROUANNE, ERIC: Le rang d'une matrice carree se promene pas a pas avec la diagonale, **8**: 539–545 (1974)

TERWILLIGER, PAUL: Root system graphs, **94**: 157–163 (1987)

THAKARE, N. K.: *See* Phadke, S. V.

THOMAS, DONALD H.: A natural tensor product interpolation formula and the pseudoinverse of a matrix, **13**: 239–250 (1976)

THOMAS, R. S. D.: *See* Hoskins, W. D.

THOMASSEN, CARSTEN: Sign-nonsingular matrices and even cycles in directed graphs, **75**: 27–41 (1986)

THOMPSON, GERALD L. AND WEIL, ROMAN L.: The roots of matrix pencils ($Ay = \lambda By$): Existence, calculations, and relations to game theory, **5**: 207–226 (1972)

THOMPSON, R. C.: p-adic matrix valued inequalities, **71**: 299–308 (1985)

THOMPSON, R. C.: Dissipative matrices and related results, **11**: 155–169 (1975)

THOMPSON, R. C.: Interlacing inequalities for invariant factors, **24**: 1–31 (1979)

THOMPSON, R. C.: On the matrices AB and BA, **1**: 43–58 (1968)

THOMPSON, R. C.: On the real and absolute singular values of a matrix product, **4**: 243–254 (1971)

THOMPSON, R. C.: Principal minors of complex symmetric and skew matrices, **28**: 249–255 (1979)

THOMPSON, R. C.: Principal submatrices. IV. On the independence of the eigenvalues of different principal submatrices, **2**: 355–374 (1969)

THOMPSON, R. C.: Principal submatrices. IX. Interlacing inequalities for singular values of submatrices, **5**: 1–12 (1972)

THOMPSON, R. C.: Principal submatrices. VI. Cases of equality in certain linear inequalities, **2**: 375–379 (1969)

THOMPSON, R. C.: Singular value inequalities for matrix sums and minors, **11**: 251–269 (1975)

THOMPSON, R. C.: The L property for singular values, **3**: 179–183 (1970)

THOMPSON, R. C.: The behavior of eigenvalues and singular values under perturbations of restricted rank: Collection of articles dedicated to Olga Taussky Todd, **13**: 69–78 (1976)

THOMPSON, R. C.: The characteristic polynomial of a principal subpencil of a Hermitian matrix pencil, **14**: 135–177 (1976)

THOMPSON, R. C.: The eigenvalues of a partitioned Hermitian matrix involving a parameter, **9**: 243–260 (1974)

THOMPSON, R. C. AND MCENTEGGERT, P.: Principal submatrices. II. The upper and lower quadratic inequalities, **1**: 211–243 (1968)

THOMPSON, ROBERT C.: A converse to the Ostrowski-Taussky determinantal inequality, **52**: 693–699 (1983)

THOMPSON, ROBERT C.: Counterexamples concerning the diagonal elements of normal matrices, **49**: 285–291 (1983)

THOMPSON, ROBERT C.: Singular values and diagonal elements of complex symmetric matrices, **26**: 65–106 (1979)

THOMPSON, ROBERT C.: The Jacobi-Gundelfinger-Frobenius-Iohvidov rule and the Hasse symbol, **44**: 189–196 (1982)

THOMPSON, ROBERT C.: The Smith form, the inversion rule for 2×2 matrices, and the uniqueness of the invariant factors for finitely generated modules, **44**: 197–201 (1982)

THOMPSON, ROBERT C. AND FREEDE, LINDA J.: On the eigenvalues of sums of Hermitian matrices, **4**: 369–376 (1971)

THORPE, JOHN A.: *See* Heymann, Michael

TIMLAKE, WILLIAM P.: *See* Lynn, M. Stuart

TISMENETSKY, M.: Determinant of block-Toeplitz band matrices, **85**: 165–184 (1987)

TISMENETSKY, M.: *See* Lancaster, P.

TISMENETSKY, M.: *See* Lerer, L.

TODA, MITSUHIKO: *See* Patel, Rajnikant

TODD, JOHN: *See* Stembridge, John R.

TOGAWA, YOSHIO: A geometric study of the D-stability problem, **33**: 133–151 (1980)

TOMIYAMA, JUN: On the geometry of positive maps in matrix algebras. II, **69**: 169–177 (1985)

TORGASEV, ALEKSANDAR: Infinite graphs with the least limiting eigenvalue greater than -2, **82**: 133–141 (1986)

TORSNEY, B.: Moment inequalities via optimal design theory, **82**: 237–253 (1986)

TOVAR, RAUL: *See* Nowosad, Pedro

TOWERS, DAVID: Lie algebras all of whose proper subalgebras are nilpotent, **32**: 61–73 (1980)

TRAPP, G. E.: *See* Anderson, W. N., Jr.

TRAPP, GEORGE E.: *See* Anderson, William N., Jr.

TRAPP, GEORGE E.: *See* Mitra, Sujit Kumar

TRAUB, J. F.: *See* Dekker, T. J.

TREMON, MICHEL: Polynomes de degre minimum connectant deux projections dans une algebre de Banach: Minimum degree

polynomials connecting two projections in a Banach algebra, **64**: 115–132 (1985)

TRENCH, W. F.: *See* Greville, T. N. E.

TRENCH, WILLIAM F.: A note on solving nearly triangular Toeplitz systems, **93**: 57–65 (1987)

TRENCH, WILLIAM F.: On the eigenvalue problem for Toeplitz band matrices, **64**: 199–214 (1985)

TRENCH, WILLIAM F.: Solution of systems with Toeplitz matrices generated by rational functions, **74**: 191–211 (1986)

TROMBORG, B. AND WALDENSTROM, S.: Bounds on the diagonal elements of a unitary matrix, **20**: 189–195 (1978)

TROSKIE, C. G. AND CONRADIE, W. J.: The distribution of the ratios of characteristic roots (condition numbers) and their applications in principal component or ridge regression, **82**: 255–279 (1986)

TROTTENBERG, ULRICH: *See* Ries, Manfred

TROTTENBERG, ULRICH AND WINTER, GERD: On faces and W-irreducible operators in finite-dimensional linear spaces, **33**: 87–109 (1980)

TRUEMPER, K.: Complement total unimodularity, **30**: 77–92 (1980)

TRUEMPER, K. AND CHANDRASEKARAN, R.: Local unimodularity of matrix-vector pairs, **22**: 65–78 (1978)

TRUONG, T. K.: *See* Hsu, I. S.

TSAI, JASON S. H.: *See* Tsay, Yih T.

TSAO, HOW: *See* Wright, Tommy

TSATSOMEROS, MICHAEL: *See* Stern, Ronald J.

TSAY, LIANG-HUEI: *See* Marsaglia, George

TSAY, YIH T., SHIEH, LEANG S., AND TSAI, JASON S. H.: A fast method for computing the principal nth roots of complex matrices, **76**: 205–221 (1986)

TSING, NAM KIU: The constrained bilinear form and the C-numerical range, **56**: 195–206 (1984)

TURISCO, JOANN: Quadratic mappings of spheres, **23**: 261–274 (1979)

TURISCO, JOANN S.: A family of quadratic forms associated to quadratic mappings of spheres, **65**: 249–260 (1985)

TURKEL, E.: Symmetric hyperbolic difference schemes and matrix problems, **16**: 109–129 (1977)

TURNER, KATHRYN: *See* Dennis, J. E., Jr.

TURNER, R. E. L.: Perturbation with two parameters, **2**: 1–11 (1969)

TURNER, R. E. L.: *See* Barker, G. P.

TURNER, R. E. L.: *See* Schneider, Hans

UCHIMURA, KEISUKE: Perron-Frobenius theory of some algebraic equations associated with context free grammars, **78**: 11–22 (1986)

UHLIG, FRANK: A canonical form for a pair of real symmetric matrices that generate a nonsingular pencil, **14**: 189–209 (1976)

UHLIG, FRANK: A recurring theorem about pairs of quadratic forms and extensions: a survey, **25**: 219–237 (1979)

UHLIG, FRANK: Explicit polar decomposition and a near-characteristic polynomial: the 2×2 case, **38**: 239–249 (1981)

UHLIG, FRANK: Inertia and eigenvalue relations between symmetrized and symmetrizing matrices for the real and the general field case, **35**: 203–226 (1981)

UHLIG, FRANK: On the matrix equation $AX = B$ with applications to the generators of a controllability matrix, **85**: 203–209 (1987)

UHLIG, FRANK: On the nonsingular symmetric factors of a real matrix, **8**: 351–354 (1974)

UHLIG, FRANK: Relations between the fields of values of a matrix and of its polar factors: the 2×2 real and complex case, **52**: 701–715 (1983)

UHLIG, FRANK: Simultaneous block diagonalization of two real symmetric matrices, **7**: 281–289 (1973)

UHLIG, FRANK: *See* Carlson, David

UHLIG, FRANK: *See* Johnson, Charles R.

UHLIG, FRANK: *See* Ran, Andre

UHRIN, BELA: A characterization of finite Chebyshev sequences in R^n, **18**: 59–74 (1977)

ULLMAN, F. D.: *See* Lovass-Nagy, V.

UPTON, C. J. F.: *See* Russell, A. M.

URSIC, SILVIO: Inverse matrix representation with one triangular array, **47**: 151–157 (1982)

USMANI, RIAZ A.: Explicit inverse of a band matrix with application to computing eigenvalues of a Sturm-Liouville system, **86**: 189–198 (1987)

USMANI, RIAZ A.: Properties of a five-band matrix and its application to boundary value problems, **4**: 101–115 (1971)

VALIAHO, HANNU: Criteria for copositive matrices, **81**: 19–34 (1986)

VAN DE VEL, H.: Numerical treatment of a generalized Vandermonde system of equations, **17**: 149–179 (1977)

VAN DEN DRIESSCHE, P.: *See* Johnson, Charles R.

VAN DEN DRIESSCHE, P.: *See* Olesky, D. D.

VAN DEN DRIESSCHE, PAULINE: *See* Jeffries, Clark

VAN DER PLAS, ADRIAAN P.: *See* Don, F. J. Henk

VAN DER SLUIS, A.: Gershgorin domains for partitioned matrices, **26**: 265–280 (1979)

VAN DER SLUIS, A. AND VAN DER VORST, H. A.: The convergence behavior of Ritz values in the presence of close eigenvalues, **88**: 651–694 (1987)

VAN DER SLUIS, A. AND VELTKAMP, G. W.: Restoring rank and consistency by orthogonal projection, **28**: 257–278 (1979)

VAN DER VORST, H. A.: *See* van der Sluis, A.

VAN DOOREN, P.: The computation of Kronecker's canonical form of a singular pencil, **27**: 103–140 (1979)

VAN DOOREN, P.: *See* Charlier, J.-P.

VAN DOOREN, P.: *See* Paige, C. C.

VAN DOOREN, PAUL: *See* Genin, Yves

VAN DOOREN, PAUL AND DEWILDE, PATRICK: The eigenstructure of an arbitrary polynomial matrix: computational aspects, **50**: 545–579 (1983)

VAN EMDE BOAS, P.: *See* van Leeuwen, J.

VAN GEEL, J.: *See* Puystjens, R.

VAN GEEL, JAN: *See* Robinson, Donald W.

VAN HUFFEL, SABINE AND VANDEWALLE, JOOS: Algebraic relationships between classical regression and total least-squares estimation, **93**: 149–160 (1987)

VAN HUFFEL, SABINE AND VANDEWALLE, JOOS: Subset selection using the total least squares approach in collinearity problems with errors in the variables, **88**: 695–714 (1987)

VAN KEMPEN, H. P. M.: Variation of the eigenvalues of a special class of Hermitian matrices upon variation of some of its elements, **3**: 263–273 (1970)

VAN LEEUWEN, J. AND VAN EMDE BOAS, P.: Some elementary proofs of lower bounds in complexity theory, **19**: 63–80 (1978)

VAN LINT, J. H.: Notes on Egoritsjev's proof of the van der Waerden conjecture, **39**: 1–8 (1981)

VAN LOAN, CHARLES: On estimating the condition of eigenvalues and eigenvectors, **88**: 715–732 (1987)

VAN LOAN, CHARLES: *See* Golub, Gene H.

VAN LOAN, CHARLES: *See* Paige, Chris

VAN LOAN, G.: A symplectic method for approximating all the eigenvalues of a Hamiltonian matrix, **61**: 233–251 (1984)

VANDERGRAFT, JAMES S.: A note on irreducibility for linear operators on partially ordered finite dimensional vector spaces: Collection of articles dedicated to Olga Taussky Todd, **13**: 139–146 (1976)

VANDERGRAFT, JAMES S.: Generalized Rayleigh methods with applications to finding eigenvalues of large matrices, **4**: 353–368 (1971)

VANDEWALLE, JOOS: *See* Van Huffel, Sabine

VARAH, J. M.: A lower bound for the smallest singular value of a matrix, **11**: 3–5 (1975)

VARGA, R. S.: *See* Anderson, N.

VARGA, R. S.: *See* Berman, A.

VARGA, R. S.: *See* Neumaier, A.

VARGA, R. S.: *See* Niethammer, W.

VARGA, R. S., NIETHAMMER, W., AND CAI, D. Y.: p-cyclic matrices and the symmetric successive overrelaxation method, **58**: 425–439 (1984)

VARGA, RICHARD S.: A note on an open question on ω- and τ-matrices, **18**: 45–52 (1977)

VARGA, RICHARD S.: Nonnegatively posed problems and completely monotonic functions, **1**: 329–347 (1968)

VARGA, RICHARD S.: On a connection between infima of norms and eigenvalues of associated operators, **6**: 249–256 (1973)

VARGA, RICHARD S.: On diagonal dominance arguments for bounding $\|A^{-1}\|_\infty$, **14**: 211–217 (1976)

VARGA, RICHARD S.: On recurring theorems on diagonal dominance: Collection of articles dedicated to Olga Taussky Todd, **13**: 1–9 (1976)

VARGA, RICHARD S.: *See* Buoni, John J.
VARGA, RICHARD S.: *See* Carlson, David H.
VASERSTEIN, L. N.: On arithmetic subgroups of simple algebraic groups, **72**: 93–96 (1985)
VASERSTEIN, L. N. AND MAGURN, B. A.: Prestabilization for K_1 of Banach algebras, **95**: 69–96 (1987)
VAUGHAN, THERESA P.: Linear transformations of a finite field, **8**: 413–426 (1974)
VAUGHAN, THERESA P.: *See* Byrd, Ken
VAUGHAN, THERESA P.: *See* Long, Andrew F.
VAUGHAN, THERESA P.: *See* Long, Andrew F., Jr.
VAVŘÍN, ZDENĚK: Multiplication of diagonal transforms of Loewner matrices, **99**: 1–40 (1988)
VAVRIN, ZDENEK: Inverses of Lowner matrices, **63**: 227–236 (1984)
VEIN, P. R.: A short survey of some recent applications of determinants, **42**: 287–297 (1982)
VEIN, P. R.: Identities among certain triangular matrices, **82**: 27–79 (1986)
VEINOTT, ARTHUR F., JR.: Extreme points of Leontief substitution systems, **1**: 181–194 (1968)
VELTKAMP, G. W.: *See* van der Sluis, A.
VERE-JONES, D.: An identity involving permanents, **63**: 267–270 (1984)
VERFURTH, R.: The contraction number of a multigrid method with mesh ratio 2 for solving Poisson's equation, **60**: 113–128 (1984)
VERGHESE, GEORGE C.: A "Cramer rule" for the least-norm, least-squared-error solution of inconsistent linear equations, **48**: 315–316 (1982)
VERGHESE, GEORGE C.: *See* Lou, Sheldon X.-C.
VESELIC, K.: On real eigenvalues of real tridiagonal matrices, **27**: 167–171 (1979)
VESELIC, K.: On the Jordan form in a unitary space, **8**: 507–514 (1974)
VETTER, WILLIAM J.: Vector structures and solutions of linear matrix equations, **10**: 181–188 (1975)
VIDAV, IVAN: The group of isometries and the structure of a finite-dimensional Banach space, **14**: 227–236 (1976)
VIDAV, IVAN: *See* Mizori-Oblak, Pavla
VIDYASAGAR, M. AND VISWANADHAM, N.: Construction of inverses with prescribed zero minors and applications to decentralized stabilization, **83**: 103–115 (1986)
VILLAR, ANTONIO: *See* Fujimoto, Takao
VIRTANEN, ARI: *See* Kankaanpaa, Hilkka
VISWANADHAM, N.: *See* Vidyasagar, M.
VITALE, RICHARD A.: *See* Najfeld, Igor
VITORIA, JOSE: Block eigenvalues of block compound matrices, **47**: 23–34 (1982)
VITORIA, JOSE: Matricial norms and the difference between the zeros of determinants with polynomial elements, **28**: 279–283 (1979)
VON BELOW, JOACHIM: A characteristic equation associated to an eigenvalue problem on c^2-networks, **71**: 309–325 (1985)
VON RANDOW, RABE: *See* Cottle, Richard W.
VON ZUR GATHEN, JOACHIM: Permanent and determinant, **96**: 87–100 (1987)
VREUGDENHIL, R.: *See* Ran, A. C. M.

WAKSMAN, Z.: *See* Galperin, A. M.
WALDENSTROM, S.: *See* Tromborg, B.
WALL, J. R.: Generalized inverses of stochastic matrices, **10**: 147–154 (1975)
WALL, J. R.: *See* Grone, Robert D.
WALL, J. R.: *See* Haynsworth, Emilie
WALTER, MARTIN E.: On the norm of a Schur product, **79**: 209–213 (1986)
WALTON, D. J.: *See* Hoskins, W. D.
WANG, EDWARD T. H.: *See* Brenner, J. L.
WANG, EDWARD TZU-HSIA: Maximum and minimum diagonal sums of doubly stochastic matrices, **8**: 483–505 (1974)
WANG, GUO RONG: A Cramer rule for minimum-norm (T) least-squares (S) solution of inconsistent linear equations, **74**: 213–218 (1986)
WANG, KAI: Characteristic polynomials of symmetric graphs, **51**: 121–125 (1983)
WANG, KAI: On the generalization of a retrocirculant, **37**: 35–43 (1981)
WANG, KAI: On the generalizations of circulants, **25**: 197–218 (1979)
WANG, KAI: On the group matrices for a generalized dihedral group, **39**: 83–89 (1981)
WANG, KAI: Resultants and group matrices, **33**: 111–122 (1980)
WANG, STUART SUI SHENG: *See* McKay, James H.

WANSBEEK, TOM: *See* Neudecker, Heinz
WARD, J. D.: *See* Narcowich, F. J.
WARD, R. C.: *See* Berman, A.
WARD, ROBERT C.: *See* Berman, Abraham
WARD, ROBERT C.: *See* Scott, David S.
WARNER, DAN: *See* Johnson, Charles R.
WASAN, SIRI KRISHAN: A new proof of Korzhik's result on burst distributions, **59:** 115–119 (1984)
WASILKOWSKI, G. W.: *See* Weiss, N.
WASOW, WOLFGANG: Arnold's canonical matrices and the asymptotic simplification of ordinary differential equations, **18:** 163–170 (1977)
WATERHOUSE, WILLIAM C.: A conjectured property of Hermitian pencils, **51:** 173–177 (1983)
WATERHOUSE, WILLIAM C.: A note on Fan's identity for symmetric bilinear forms, **90:** 235–237 (1987)
WATERHOUSE, WILLIAM C.: Elementary divisors of s-symmetric matrices, **93:** 241–245 (1987)
WATERHOUSE, WILLIAM C.: Linear maps preserving reduced norms, **43:** 197–200 (1982)
WATERHOUSE, WILLIAM C.: Linear transformations on selfadjoint matrices: the preservation of rank-one-plus-scalar, **74:** 73–85 (1986)
WATERHOUSE, WILLIAM C.: Real classification of complex quadrics, **48:** 45–52 (1982)
WATERHOUSE, WILLIAM C.: The codimension of singular matrix pairs, **57:** 227–245 (1984)
WATERHOUSE, WILLIAM C.: *See* Ma, S. L.
WATERS, STEVEN R.: *See* Hill, Richard D.
WATERS, STEVEN R. AND HILL, RICHARD D.: An inertial decomposition and related range results, **72:** 145–153 (1985)
WATERS, STEVEN R. AND HILL, RICHARD D.: Generalized controllability and inertia theory. II, **72:** 161–166 (1985)
WATERS, STEVEN R. AND HILL, RICHARD D.: On the inertia and range of transformations of positive definite matrices, **72:** 155–160 (1985)
WATFORD, LUCK J., JR.: The Schur complement of a generalized M-matrix, **5:** 247–255 (1972)
WATKINS, WILLIAM: Linear maps that preserve commuting pairs of matrices, **14:** 29–35 (1976)
WATKINS, WILLIAM: *See* Merris, Russell
WATKINS, WILLIAM: *See* Rackusin, Jeffrey
WATSON, GEOFFREY S.: A method for discovering Kantorovich-type inequalities and a probabilistic interpretation, **97:** 211–217 (1987)
WATSON, GEOFFREY S.: *See* Cabrera, Javier F.
WATSON, L. T.: *See* Kelly, L. M.
WATTERS, J. F.: Block triangularization of algebras of matrices, **32:** 3–7 (1980)
WATTERS, J. F.: Simultaneous quasi-diagonalization of normal matrices, **9:** 103–117 (1974)
WEBB, J. R. L.: Topological degree and A-proper operators: Proceedings of the symposium on operator theory (Athens, 1985), **84:** 227–242 (1986)
WEBBER, P. N.: *See* Lancaster, P.
WEBBER, ROBERT P.: Matrix semigroups determined by unitarily invariant norms, **8:** 141–156 (1974)
WEGMANN, RUDOLF: *See* Kress, Rainer
WEHRFRITZ, B. A. F.: Finite central height in linear groups, **17:** 59–64 (1977)
WEICHSEL, PAUL M.: Polynomials on graphs, **93:** 179–186 (1987)
WEIL, ROMAN L.: *See* Thompson, Gerald L.
WEINBERG, DAVID A.: Canonical forms for symmetric tensors, **57:** 271–282 (1984)
WEINBERG, LOUIS: *See* Bruno, John
WEINBERG, LOUIS: *See* Lawrence, Jim
WEINBERGER, H. F.: Optimal numerical approximation of a linear operator, **52:** 717–737 (1983)
WEISS, N., WASILKOWSKI, G. W., WOZNIAKOWSKI, H. , AND SHUB, M.: Average condition number for solving linear equations, **83:** 79–102 (1986)
WERNER, B.: Einschliessung des positiven Eigenvektors einer nichtnegativen, irreduziblen Matrix, **7:** 351–359 (1973)
WERNER, HANS JOACHIM: Charakterisierungen von monotonen Matrizen: Characterizations of monotone matrices, **60:** 79–90 (1984)
WERNER, HANS-JOACHIM: Drazin-monotonicity characterizations for property-n matrices, **71:** 327–337 (1985)
WERNER, HANS-JOACHIM: More on BLU estimation in regression models with possibly

singular covariances, **67**: 207–214 (1985)

WERNER, HANS-JOACHIM: On the matrix monotonicity of generalized inversion, **27**: 141–145 (1979)

WERNER, HANS-JOACHIM: On weak r-monotonicity, **86**: 199–209 (1987)

WERNER, HANS-JOACHIM: *See* Neumann, Michael

WERNER, WILHELM: A generalized companion matrix of a polynomial and some applications, **55**: 19–36 (1983)

WERNICK, ROBERT J.: Parametrized games and the eigenproblem, **3**: 311–346 (1970)

WESTWICK, R.: Spaces of linear transformations of equal rank, **5**: 49–64 (1972)

WHITE, NEIL L.: A unique exchange property for bases, **31**: 81–91 (1980)

WIBKER, E. A., HOWE, R. B., AND GILBERT, J. D.: Explicit solutions to the reverse order law $(AB)^+ = B_{mr}^+ A_{lr}^+$, **25**: 107–114 (1979)

WIELANDT, HELMUT: *See* Deutsch, Emeric

WIELANDT, HELMUT W.: Helmut Wielandt, **71**: 1–8 (1985)

WIELANDT, HELMUT W.: *See* Brualdi, Richard A.

WIENER, GERRY: A theorem concerning certain sign symmetric matrices whose inverses are Morishima, **68**: 31–45 (1985)

WIENER, GERRY: Some results concerning invertible Morishima and anti-Morishima matrices whose associated digraphs are trees, **66**: 199–219 (1985)

WIENER, GERRY: Some structural results concerning certain classes of qualitative matrices and their inverses, **48**: 161–175 (1982)

WIENER, GERRY: Spectral multiplicity and splitting results for a class of qualitative matrices, **61**: 15–29 (1984)

WIENS, DOUGLAS P.: On some pattern-reduction matrices which appear in statistics, **67**: 233–258 (1985)

WIITALA, STEPHEN A.: Factorization of involutions in characteristic two orthogonal groups: an application of the Jordan form to group theory, **21**: 59–64 (1978)

WILD, P. AND NIETHAMMER, W.: Over- and underrelaxation for linear systems with weakly cyclic Jacobi matrices of index p, **91**: 29–52 (1987)

WILKER, J. B.: The Apollonian octets and an inversive form of Krause's theorem, **48**: 131–144 (1982)

WILKINSON, J. H.: Almost diagonal matrices with multiple or close eigenvalues, **1**: 1–12 (1968)

WILKINSON, J. H.: Global convergence of tridiagonal QR algorithm with origin shifts, **1**: 409–420 (1968)

WILKINSON, J. H.: Kronecker's canonical form and the QZ algorithm, **28**: 285–303 (1979)

WILKINSON, J. H.: On a theorem of Feingold, **88**: 13–30 (1987)

WILKINSON, J. H.: *See* Dongarra, J. J.

WILKINSON, JAMES H.: Dedication, **88**: 1–12 (1987)

WILLEMS, JAN C.: Input-output and state-space representations of finite-dimensional linear time-invariant systems, **50**: 581–608 (1983)

WILLIAMS, A. C.: Boundedness relations for linear constraint sets, **3**: 129–141 (1970)

WILLIAMS, J. J.: *See* Shivakumar, P. N.

WILLIAMSON, S. G.: Tensor contraction and hermitian forms, **2**: 335–347 (1969)

WILLIAMSON, S. G.: *See* Botta, Peter

WILLOUGHBY, R. A.: The inverse M-matrix problem, **18**: 75–94 (1977)

WILLOUGHBY, R. A.: *See* Micchelli, Charles A.

WILLOUGHBY, RALPH A.: *See* Cullum, Jane

WILLSKY, ALAN S.: *See* Lou, Sheldon X.-C.

WILSON, D. G.: *See* Gray, L. J.

WILSON, PETER B.: Bounds for iterated normal matrices, **10**: 7–18 (1975)

WILSON, RICHARD M.: Incidence matrices of t-designs, **46**: 73–82 (1982)

WIMMER, H. K.: Two linear equations in formal power series, **29**: 465–469 (1980)

WIMMER, HARALD K.: An inertia theorem for tridiagonal matrices and a criterion of Wall on continued fractions, **9**: 41–44 (1974)

WIMMER, HARALD K.: Duality of finite abelian groups and a Jordan normal form of integer matrices, **90**: 89–104 (1987)

WIMMER, HARALD K.: Generalizations of theorems of Lyapunov and Stein, **10**: 139–146 (1975)

WIMMER, HARALD K.: Indefinite inner-product spaces associated with Hermitian polynomial matrices, **50**: 609–619 (1983)

WIMMER, HARALD K.: Inertia theorems for matrices, controllability, and linear vibrations, **8**: 337–343 (1974)

WIMMER, HARALD K.: Jordan-Ketten und Realisierungen rationaler Matrizen, **20**: 101–110 (1978)

WIMMER, HARALD K.: On Ostrowski's generalization of Sylvester's law of inertia, **52**: 739–741 (1983)

WIMMER, HARALD K.: Powers of a matrix and a formula for the moduli of its eigenvalues, **71**: 339–340 (1985)

WIMMER, HARALD K.: The algebraic Riccati equation: conditions for the existence and uniqueness of solutions, **58**: 441–452 (1984)

WIMMER, HARALD K.: *See* Flanders, Harley

WIMMER, HARALD K.: *See* Ptak, Vlastimil

WINOGRAD, S.: On multiplication of 2×2 matrices, **4**: 381–388 (1971)

WINOGRAD, S.: On the algebraic complexity of inner product, **4**: 377–379 (1971)

WINOGRAD, S.: *See* Auslander, L.

WINOGRAD, SHMUEL: *See* Feig, Ephraim

WINTER, GERD: *See* Ries, Manfred

WINTER, GERD: *See* Trottenberg, Ulrich

WITTING, H.: *See* Muller-Funk, U.

WOLKOWICZ, HENRY: Some applications of optimization in matrix theory, **40**: 101–118 (1981)

WOLKOWICZ, HENRY: *See* Grone, Robert

WOLKOWICZ, HENRY: *See* Johnson, Charles R.

WOLKOWICZ, HENRY: *See* Merikoski, Jorma Kaarlo

WOLKOWICZ, HENRY: *See* Smith, P. W.

WOLKOWICZ, HENRY AND STYAN, GEORGE P. H.: Bounds for eigenvalues using traces, **29**: 471–506 (1980)

WOLKOWICZ, HENRY AND STYAN, GEORGE P. H.: More bounds for eigenvalues using traces, **31**: 1–17 (1980)

WONG, CHI SONG: Characterizations of products of symmetric matrices, **42**: 243–251 (1982)

WONG, CHI SONG: On the use of differentials in statistics, **70**: 285–299 (1985)

WONG, EDWARD T.: Involutory functions and Moore–Penrose inverses of matrices in an arbitrary field, **48**: 283–291 (1982)

WONG, R.: *See* Shivakumar, P. N.

WORM, G.: *See* Cline, R. E.

WORZ-BUSEKROS, ANGELIKA: Relationship between genetic algebras and semicommutative matrices, **39**: 111–123 (1981)

WOZNIAKOWSKI, H.: Roundoff-error analysis of a new class of conjugate-gradient algorithms, **29**: 507–529 (1980)

WOZNIAKOWSKI, H. : *See* Weiss, N.

WRIGHT, MARGARET H.: *See* Gill, Philip E.

WRIGHT, TOMMY AND TSAO, HOW: On an optimal solution for maximizing the probability of retention in PPS sampling, **67**: 67–80 (1985)

WU, CHIEN FU: On some ordering properties of the generalized inverses of nonnegative definite matrices, **32**: 49–60 (1980)

WU, PEI YUAN: Products of nilpotent matrices, **96**: 227–232 (1987)

WU, SHU HEI: *See* Cheng, Sui-Sun

WYMAN, BOSTWICK F. AND SAIN, MICHAEL K.: On the zeros of a minimal realization, **50**: 621–637 (1983)

WYNN, H. P.: *See* Giovagnoli, A.

WYNN, P.: Vector continued fractions, **1**: 357–395 (1968)

YAMADA, TAKEO AND LUENBERGER, DAVID G.: Generic properties of column-structured matrices, **65**: 189–206 (1985)

YAMAMOTO, TETSURO AND IKEBE, YASUHIKO: Inversion of band matrices, **24**: 105–111 (1979)

YANAI, HARUO: *See* Rao, C. Radhakrishna

YANG, SHANG JUN: Structure of $\mathscr{H}$-classes in the semigroup of nonnegative matrices, **60**: 91–111 (1984)

YARLAGADDA, R.: Stabilization of matrices, **21**: 271–288 (1978)

YARLAGADDA, R. AND HERSHEY, J.: A note on the eigenvectors of Hadamard matrices of order 2^n, **45**: 43–53 (1982)

YCART, BERNARD: Extremales du cone des matrices de type non negatif, a coefficients positifs ou nuls: (Extremals of the cone of nonnegative matrices with positive or zero coefficients), **48**: 317–330 (1982)

YEYIOS, A.: On the optimization of an extrapolation method, **57**: 191–203 (1984)

YEYIOS, A.: *See* Hadjidimos, A.

YIP, E. L.: *See* Ballantine, C. S.

YIP, E. L. AND BALLANTINE, C. S.: A note on stable matrices, **56**: 17–28 (1984)
YIP, E. L. AND BALLANTINE, C. S.: Congruence and conjunctivity of matrices to their adjoints, **41**: 33–72 (1981)
YOUNG, DAVID M.: *See* Jea, Kang C.
YOUNG, DAVID M.: *See* Joubert, Wayne D.
YOUNG, DAVID M. AND JEA, KANG C.: Generalized conjugate-gradient acceleration of nonsymmetrizable iterative methods, **34**: 159–194 (1980)
YOUNG, N. J.: A bound for norms of functions of matrices, **37**: 181–186 (1981)
YOUNG, N. J.: Linear fractional transformations in rings and modules, **56**: 251–290 (1984)
YOUNG, N. J.: Norms of powers of matrices with constrained spectra, **23**: 227–244 (1979)
YOUNG, N. J.: The rate of convergence of a matrix power series, **35**: 261–278 (1981)
YOUNG, N. J.: The singular-value decomposition of an infinite Hankel matrix, **50**: 639–656 (1983)
YOUNG, N. J.: *See* Ptak, Vlastimil
YUAN, HONG: The kth largest eigenvalue of a tree, **73**: 151–155 (1986)

ZABALLA, ION: Existence of matrices with prescribed entries, **73**: 227–280 (1986)
ZABALLA, ION: Matrices with prescribed rows and invariant factors, **87**: 113–146 (1987)
ZAKS, ABRAHAM: *See* Schwarz, Binyamin
ZALINESCU, CONSTANTIN: On convex sets in general position, **64**: 191–198 (1985)
ZAMFIRESCU, CHRISTINA M.: *See* Simoes-Pereira, J. M. S.
ZANGWILL, W. I.: *See* Garcia, C. B.
ZASSENHAUS, H.: *See* Fabrykowski, J.
ZASSENHAUS, HANS: On the Cartan subalgebra of a Lie algebra, **52**: 743–761 (1983)
ZELLINI, PAOLO: On some properties of circulant matrices, **26**: 31–43 (1979)
ZELLINI, PAOLO: On the optimal computation of a set of symmetric and persymmetric bilinear forms, **23**: 101–119 (1979)
ZELLINI, PAOLO AND MACK, ANGELA: On some theorems on circulant matrices, **41**: 137–149 (1981)
ZELMANOWITZ, JULIUS M.: *See* Gustafson, William H.
ZEMANEK, JAROSLAV: *See* Aupetit, Bernard
ZENGER, C.: *See* Friedland, S.
ZENGER, CHRISTOPH: Dual operator norms and the spectra of matrices, **58**: 453–460 (1984)
ZENGER, CHRISTOPH: Minimal subadditive inclusion domains for the eigenvalues of matrices, **17**: 233–268 (1977)
ZHANG, KE MIN: On Lewin and Vitek's conjecture about the exponent set of primitive matrices, **96**: 101–108 (1987)
ZHANG, MOU CHENG: On graph compatible splittings of M-matrices, **91**: 177–179 (1987)
ZHANG, MOU CHENG: *See* Chao, Chong Yun
ZHANG, YIN: *See* Cao, Zhi Hao
ZHANG, ZHEN YUE: *See* Jiang, Er Xiong
ZHENG, YU FAN: The properties of decentralized systems under local feedbacks via polynomial models, **92**: 161–185 (1987)
ZIEGLER, Z.: *See* Saxena, R. B.
ZIETAK, K.: On a particular case of the inconsistent linear matrix equation $AX + YB = C$, **66**: 249–258 (1985)
ZIETAK, K.: Properties of the approximate generalized inverses of a class of matrices, **92**: 259–272 (1987)
ZIJM, W. H. M.: Generalized eigenvectors and sets of nonnegative matrices, **59**: 91–113 (1984)
ZIMMERMANN, KATHARINA: *See* Henrici, Peter
ZIMMERMANN, UWE: Duality for algebraic linear programming, **32**: 9–31 (1980)
ZITNY, KAREL: *See* Marek, Ivo
ZUKER, MICHAEL: *See* Tanny, Stephen M.
ZWAS, GIDEON: *See* Goldberg, Moshe